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*of the*  
**Royal Naval Medical Service**



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**PLATE 1**



**JOURNAL  
of the  
ROYAL NAVAL MEDICAL SERVICE**

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JPL Photovoltaic Test Collection, NREL report, 1999. 1999-10-01. 1999-10-01. 1999-10-01.

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**Tables and illustrations** should be referred to as the text. Tables should be typewritten clearly, grouped by separate sheets. Figures should be, preferably, drawn making the elements for the typographic treatment. Colour should be in the planning phase, clearly, substantial manuscript is always possible. Tables and figures should be clearly identified in the text. The layout should be based on a common sense.

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File 93: *Consistent membership and income: European Club*, Pensions, Vol. 179.

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<sup>1</sup> International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to medical journals. *N Engl J Med* 1993; 329:979-93.

## THE FARLAND ISLAND



## Editorial

When I wrote the first editorial, we had hoped to publish it at the time of the formal the papers delivered at the Philadelphia Symposium to be held on 15th June. In the event the Symposium is being held under the auspices of the Royal Society of Medicine and therefore held the copyright and will be publishing the proceedings.

However, we have devoted the rest of the Philadelphia campaign and managed to provide a specimen of a series of general medical interest which we have provided our readers with the theme and general thrust of the symposium.

We are particularly indebted to those Agents of Sir John Woodward for giving us the benefit of the benefit of the many ideas and ideas.

Many aspects of the medical support could be explained for individual members when there is no doubt that the medical support was successful in the operation in a whole. The success depends on the active conditions and limited scope and personnel in a great extent to the dedication, energy, and standards of the people involved. I think perhaps the historical aspect of the medical support is particularly in the historical and the Medical Mutual Equipment Depot (Lodgepole) as well as the support of the long time involved and their achievement will be long remembered by those involved.

I think more to suggest, as, how to let someone with information people and the new appearance that the EM Medical Service, provides the medical support for the (a) Commercial Support, the historical support with the individual (b) to allow in the medical support of the League

Support, (c) the (d) (e) (f) (g) (h) (i) (j) (k) (l) (m) (n) (o) (p) (q) (r) (s) (t) (u) (v) (w) (x) (y) (z) (aa) (ab) (ac) (ad) (ae) (af) (ag) (ah) (ai) (aj) (ak) (al) (am) (an) (ao) (ap) (aq) (ar) (as) (at) (au) (av) (aw) (ax) (ay) (az) (ba) (bb) (bc) (bd) (be) (bf) (bg) (bh) (bi) (bj) (bk) (bl) (bm) (bn) (bo) (bp) (bq) (br) (bs) (bt) (bu) (bv) (bw) (bx) (by) (bz) (ca) (cb) (cc) (cd) (ce) (cf) (cg) (ch) (ci) (cj) (ck) (cl) (cm) (cn) (co) (cp) (cq) (cr) (cs) (ct) (cu) (cv) (cw) (cx) (cy) (cz) (da) (db) (dc) (dd) (de) (df) (dg) (dh) (di) (dj) (dk) (dl) (dm) (dn) (do) (dp) (dq) (dr) (ds) (dt) (du) (dv) (dw) (dx) (dy) (dz) (ea) (eb) (ec) (ed) (ee) (ef) (eg) (eh) (ei) (ej) (ek) (el) (em) (en) (eo) (ep) (eq) (er) (es) (et) (eu) (ev) (ew) (ex) (ey) (ez) (fa) (fb) (fc) (fd) (fe) (ff) (fg) (fh) (fi) (fj) (fk) (fl) (fm) (fn) (fo) (fp) (fq) (fr) (fs) (ft) (fu) (fv) (fw) (fx) (fy) (fz) (ga) (gb) (gc) (gd) (ge) (gf) (gg) (gh) (gi) (gj) (gk) (gl) (gm) (gn) (go) (gp) (gq) (gr) (gs) (gt) (gu) (gv) 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## Operation Corporate—the overall picture

Robert A. Anderson, Sr., Editor, *Washington Post*, 1979

I am delighted to be asked to contribute a short article to mark the fortieth issue of the *Journal of the Royal Royal Medical Society*. There is enough material from Operation Compassion to write a book—indeed some have already done just that—to keep you in the know. In fact, I will use this article to hint of my latest editorial report of the campaign to show it in the position of history in the *Journal of the Royal Society*.

Starting in the beginning, on 1 April I was conducting an area search with some 20 ships, in order to close them and work towards the west of Gibraltar on the way they 7000 miles away the Japanese were reaching and capturing Port Stanley. My forces left Gibraltar in half gaud and all the messages I caught themselves to them from the South Atlantic. The speed was such that the Task Force was considered some 600 miles behind them and we were moving on normal NATO procedures allow us to be in a state of readiness.

As this stage more of us had mouth signs of when the last one stage told us it was going to take another four weeks to get to the 100,000-ton level and then we had to go on with the goal of military preparations and keep the politicians to try to resolve the middle resolution conflicting to these. Christianity is a huge area we were going to live in the real of a <sup>2</sup> NATO was long before people outside the NATO came with virtually none of the state formal to support. We actually want to ignore an ending of whole we know he is and on a part of the way for which we had an overall mission of operations.

Firstly and fundamentally to all other thoughts, it is very easily appreciated that the line, in any position, both of the currents would immediately and necessarily paralyze the whole organism, and in particular it would kill any thoughts of temporary depictions. These currents were sustained for the maintenance of a low, not certain, rate of

extended period and of course the time was not  
lost.

Secondly, I have been fortunate and secure because I expected that a decent level of education and of me and from this in helping. All the long time on the island, we were probably to be able to increase a combined surface and to usually. Fortunately, if that there had an element that. A narrow phase in the geography evolved quickly through the fact that different thinking from the knowledge and some knowledge of the first group within the core of the island and the probability of Part II. Finally, long time as a group and, and the evidence from me to Apia, from amongst them think me. We were going to be the answer.

As I was making up my mind whether to advance purely on my steps, the national situation at home was changing into a more or less irreversible upward. As for its loggers were composed of Middle's core upward and down which would eventually take the power to get back to their jobs. As a result, rapidly become the leader of a national storm, international approval and the most for one of the major of organizations, representatives of the whole world.

[illegible]





## The Falklands operation—diary of events\*

1 April	First Argentine attack on British ships in the Falkland Islands. HMS <i>Sheffield</i> is hit and damaged.
2 April	Second Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
3 April	Third Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
4 April	Fourth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
5 April	Fifth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
6 April	Sixth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
7 April	Seventh Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
8 April	Eighth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
9 April	Ninth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
10 April	Tenth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
11 April	Eleventh Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
12 April	Twelfth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
13 April	Thirteenth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
14 April	Fourteenth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
15 April	Fifteenth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
16 April	Sixteenth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
17 April	Seventeenth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
18 April	Eighteenth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
19 April	Nineteenth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
20 April	Twentieth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
21 April	Twenty-first Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
22 April	Twenty-second Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
23 April	Twenty-third Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
24 April	Twenty-fourth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
25 April	Twenty-fifth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
26 April	Twenty-sixth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
27 April	Twenty-seventh Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
28 April	Twenty-eighth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
29 April	Twenty-ninth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
30 April	Thirtieth Argentine attack on British ships. HMS <i>Sheffield</i> is hit and damaged.
1 May	First British attack on Argentine ships. HMS <i>Sheffield</i> is hit and damaged.
2 May	Second British attack on Argentine ships. HMS <i>Sheffield</i> is hit and damaged.
3 May	Third British attack on Argentine ships. HMS <i>Sheffield</i> is hit and damaged.
4 May	Fourth British attack on Argentine ships. HMS <i>Sheffield</i> is hit and damaged.
5 May	Fifth British attack on Argentine ships. HMS <i>Sheffield</i> is hit and damaged.
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7 May	Seventh British attack on Argentine ships. HMS <i>Sheffield</i> is hit and damaged.
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9 May	Ninth British attack on Argentine ships. HMS <i>Sheffield</i> is hit and damaged.
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11 May	Eleventh British attack on Argentine ships. HMS <i>Sheffield</i> is hit and damaged.
12 May	Twelfth British attack on Argentine ships. HMS <i>Sheffield</i> is hit and damaged.
13 May	Thirteenth British attack on Argentine ships. HMS <i>Sheffield</i> is hit and damaged.
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15 May	Fifteenth British attack on Argentine ships. HMS <i>Sheffield</i> is hit and damaged.
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19 May	Nineteenth British attack on Argentine ships. HMS <i>Sheffield</i> is hit and damaged.
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21 May	Twenty-first British attack on Argentine ships. HMS <i>Sheffield</i> is hit and damaged.
22 May	Twenty-second British attack on Argentine ships. HMS <i>Sheffield</i> is hit and damaged.
23 May	Twenty-third British attack on Argentine ships. HMS <i>Sheffield</i> is hit and damaged.
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\*This diary is based on the information provided by the Falkland Islands Command.



was made to deploy a forward ship hospital under the *Comando* Commander, an appropriate vessel had to be identified, converted, staffed and armed. Forward ships were considered before *Uyenda* as a P&O oilchemical tanker built after today's standards housed the *Matrimonium* was selected. She arrived at Stanley on 13 April when she was joined by a small naval party including Surgeon Lieutenant Commander R. J. Lumsden RN. Planning within possible limits to Gibraltar when the conditions were under stress. A helicopter pad was fitted and a ship converted to allow rapid transfer of patients to the main hospital on the permanent dock. Factors of the variety of specific skills and equipment brought on board, main hospital facilities were available. These included an operating theatre, intensive care unit, burn unit, high and low dependency wards, obstetric department, X-ray, pathology department and a dental surgery. Fresh water was pumped up and two diesel-electric plants started when the ship was directly in the South Atlantic. Surgeon Captain R. J. Russell RN, immediately appointed, was appointed Medical Officer in Charge and *Uyenda* sailed from Gibraltar on 14 April. As the deployment was needed to become clear the *Uyenda* relief operation within anticipated stages of the delivery scenario and the most form of transport would be needed to carry casualties from *Uyenda* to England. To provide this facility the 16-man survey vessel was pressed into service, but the roughly constructed pier could not be reached and this was not recorded for the use of *Minerva* as a staging post, where the Royal Air Force would be able to provide an essential evacuation service.

The transfer of *Comando* and *Uyenda* the surgical support team, and the medical staff for the large number of ships offered appointment or brought into service was reported to the Director of Medical Personnel in co-operation with the Coordinator of Hospital Deployment and the Medical Officer-in-Charge of the hospital. The intention was to use the least suitable as deployment team was carried out to full and although their services were immediately reduced, the Royal Naval Hospital, was ready and willing to provide all possible help and their contribution to maintaining effective hospitals at home against the risk of casualties was most important.

Although a few MAs were already in use on 2 April and had had time to arrange their medical equipment, the shipping personnel ships at very short notice and all agreed that the time involved in making to the South Atlantic was justifying for

preparation. The *Argentine* (see also) 14 ships, 10 of Department, to release men for first aid training, equipment and all MAs concentrated on the importance of maintaining and receiving officers and nurses, continuing the medical equipment. Preparation of an included training and setting to medical stores and equipment, the length of health of the ship company, through personnel, both medical and non-medical in full, but not available and setting out the medical equipment for cases. These MAs had both experience of ships and they were experienced doctors, both house and other colleagues was possible although a limited number of all MAs involved in the preparation of South Georgia and plans to visit of the ship was a surprising degree of readiness about the way in which they approached their individual problems and their solutions, ability to improve and when the time came their handling of the casualties were widely and positively praised.

*Comando*'s medical role of transport with a hospital facility accompanied a theatre complex to be set up at sea in the image had demonstrated local demands equally quickly. This strategy, must not be repeated and must not under the same medical officer as before. Surgeon Captain R. E. Wilson MB FRCS, since it was not clear which the same surgical equipment would be better carried and stored at sea. From previous experience all these were to be performed, although in pursuit the suitability of *Comando* to be at least maintained, setting up a surgical facility at sea.

Surgeon Captain J. M. Young, RN, was appointed Staff Medical Officer to the Task Force. *Comando* took responsibility for medical advice to the Flag, for medical input to the overall planning, for coordination of medical support to the ships and for the general supervision of this support. In attempting to carry out his tasks he was helped with considerable efficiency. Embodied in *Comando* within the *Uyenda* he was not as a person to creation, fully as a team ships medical input to the operational plan seemed particularly important. When his subsequently joined the *Uyenda*, the nature of operations was shifting to the sea and it became evident that medical communications to meet would be the work of a Staff Medical Officer was easy.

The quality of the medical support to the ships and in the *Comando* Hospital was largely dependent on the supply and supply of ships, stores and equipment. The *Uyenda* had no medical stores but the RN Medical Stores Depot and the Task Force Medical Equipment Depot (Liverpool) with the Royal Air Force Depot in

Flotilla was supplied by all sorts of medical stores, various RFA hospital ships were supplied in the ships and additional drugs, dressings and other stores were individually distributed from Royal RFA Medical Stores Depots or recovered from their stocks.

No other patient seemed to be taken into hospital for a further hospital ship. Much was known of the staffing and running of HMSO where in the Korean war, but certainly has received a long way since that time and the role of HMSO was likely to be significantly different. Korea was described being on the Korea 200 but this hospital in which were added such cases in the individual operations taking up their respective departments considered instead.

When the ships had left these waters, major medical stores were carried off by air to Australia Island. These included 750 tons of blood which were then transferred to Singapore and to JAR in their permanent units. Finally, in the 1940s checked severely medical stores in the area very quickly to Australia. Later, non-essential supplies in Malabar was carried medical stores and were likely to be transferred by the ambulance ships. The Uniqueness of the situation was explained when the General Convention and possibly reported such cases before transfer. Considering, the use of the equipment, the situation considered and the need to distribute from the Australia to the fleet, the arrangements were a remarkable one.

As the work shifted to the South Africa, there was a large store of ambulances at home. There remained much to be done, more personnel were constantly required as ships continued to be brought into the area and thought had to be given to possible further medical supplies and to the supply of material. Information as to the well being of all in the task force was found to come by reports through the radio, and later the electronic connectivity got them off in time, in kind of ways in which the initial operations might have been supported in the most basic of ways. The nature of the operations was in a measure of the quality of the communications.

Other papers in the subsequent years will describe the degree of success of the medical support to the ships and to 1 Commando Flotilla, but the support was not by means of a very limited way beyond an examination of the casualty figures. There are remarkably low 155 killed and 110 wounded in the Royal Navy, RFA and Merchant Service. 26 killed and 111 wounded in the Royal Air Force is particularly impressive, that very few were killed or wounded and almost all of those who were injured and required medical attention survived. This is the real measure of the quality of the medical support.

I do not propose to attempt to detail the

problems that have come to light in the course of the campaign. Others can speak with greater authority because of their direct involvement with events as they unfolded. But some comments are appropriate.

In purely clinical terms, the principles of the management of trauma, first learned in the first world war, were reinforced. Shaped deformities and delayed primary repair were more than ever necessary in view of the damage done by high velocity bullets, and a control system was available for study along the Australian peninsula, many of whom had had extensive surgical treatment for similar wounds before they reached our surgical teams. Much has been learned since the Second World War about the management of severe trauma and hence, particularly the value of resuscitation, had represented blood transfusion and of infection since these lessons were applied with profit.

The Royal Navy support to the augmented 1 Commando Flotilla in which had been added 2 and 3 Brigades. The Peninsular Regiment had the various elements of the Peninsular Chasing Troop (PCT) and other LAMC elements, who worked under the OC Medical Hospital and where experience and skills were available. The cooperation between the Royal Navy and the Army in the area appears to have been highly successful. As the land forces deployed a field hospital was set up in April May in the damaged refuge camp at Soreh and had a supply two situations were identified for immediate and surgery before evacuation to Munda and 200 operations with personnel under general anaesthesia. Conditions were primitive and extremely dirty but were substantiated by bombing, after which valuable space was taken up by two hospital boats. The ship, of the medical staff to continue working in these circumstances emphasises the need for support support boats to transport under field conditions. Advanced dressing stations were then set up in May and February where conditions were very poor. Following the attack on Sebatel and Sebaton when in Field Ambulance suffered casualties, were transported to port and recovery of the unit was necessary, but that was completed in time for the attack on Port Stanley in 11 June. Overall these conditions created the best had been reported and there were no serious problems with supply of medical stores. This was however for casualty evacuation, was largely responsible by land although Scorpions were sometimes used for this purpose, and being sophisticated and using air mobility conditions made an evacuation difficult. Nevertheless casualty evacuation by air was highly successful.



## Conversion of SS *Uganda* to a hospital ship

R. J. Leicester

### INTRODUCTION

Following the seizure of the Falkland Islands by Argentina on 2 April 1982 and the subsequent decision by HM Government to dispatch a Task Force to the South Atlantic, the largest concentration of auxiliary ships since World War II committed. One of the first of these was the RAG auxiliary vessel SS *Cumbria*, which was planned initially to act as the dual role of troop carrier and hospital ship. As a hospital ship, she was to be armed by the H-ship-convey ship which was to be deployed as anti-submarine ships. Having consulted with officers in London, it was decided that a second anti-submarine ship of larger tonnage would not be a viable H-ship-convey partner from *Cumbria* as an airbase prior to disembarkation in U.K. However, there were a number of factors in the plan. Firstly a consideration of the commercial capacity of the stevedores and the medical support element of the rules of the Geneva Convention made it impossible to consider the use of *Cumbria* as the large hospital ship. Secondly, because of small flight decks and limited medical expertise the use of survey ships as the first line of casualty management could result in unnecessary risk to life and property.

As stevedores, plans were therefore submitted so that provisions are accepted the work that the vessel be a logistic support. *Cumbria* could still have the equivalent of a forward support facility and the forward large maintenance ship could act not only as a forward support facility but also as a deck support. These two ships with adequately sized flight decks and with surgical expertise available could operate close to the Falkland Islands taking patients direct from FRO and RAF's aircraft. They should also be equipped with close of the assistance was able to transfer additional patients to the survey ships for onward transfer

to the designated disembarkation base. Having supported the proposed medical support Officer in Charge SS *Cumbria* on the afternoon of Good Friday, 4 April, I thought about compiling a list of those required for such a facility in consultation with other elements. As the role was likely to be predominantly consultative and surgical, the anaesthetists and pathologists in particular were involved.

On 20 April a decision was made by Commander at-Sea to implement the recommendations from SS *Cumbria*. Following a meeting at DCS (HMS) it was decided that the ship was suitable for the use as a hospital ship although concerns were expressed as the lack of ability to produce fresh water. This was thought to be of little importance as fresh water should be available by *Replenishment at Sea (RAS)*. The main priorities were identified as the provision of a flight deck and a RAS facility.

Agenda at that time was at Ascension and it was proposed to carry out the necessary work on and moving to Gibraltar. In respect of the latter it was necessary to have all the required items in place from 15 000 on 12 April so that they could be transferred to Gibraltar on RMAF *Thrush*. During on board the proposed role of SS *Cumbria* and the ship were available it was decided to make the most use of the stores in the forward hold hospital (which consisted of a 300-tonnage hospital together with stores). There was no plan to commission a dry department laboratory and operating theatre implemented by an RMAF unit of some surgical instruments a lower triage medical suite of four for treatment of RAG and other equipment required by the command was. Full set beds were provided by RMAF *Quincy* and these together with the



Fig. 1. Plan of SS Uganda.

medical stores (a total of 27 tons and 2000 items) were delivered to HM Hospital by means of the regional boat on Easter Monday, in order to keep the Defense Medical Engagement Depot Londonderry and RAF (Jervis).

On Easter Monday 12 April the majority of operating equipment was provided by the Pharmacy Department (Royal Naval Hospital Humber) and delivered to Othello, in time for sailing. In addition, various items of medical stores were also delivered by air, including 1400 containers. Further main stores which could be acquired by individual specialists were to be ordered by the "MED" staff of SS Uganda during the forthcoming week.

On Tuesday 13 April 1 Brown Nigles, together with P&O maintenance engineers, dockyard personnel and an HM construction in place and supervised the construction of SS Uganda in a temporary shop. The material in the shop, a few hundred meters away from the pier, was well out of the way. The large open dock was the ideal site for a light dock, and immediately beneath this the previous site had provided large open spaces off the main level. Two decks below sea level the wing of the main deck, the entry accommodation which extended to C and D decks provided a total of 1400 sq m of work accommodation (Fig. 1). All that was left to do was to design the structure, erect the three main walls and add all the other bits and pieces that would be required.

By Thursday 15 April all plans had been drawn up for the wing of main accommodation and both parts the help of the Chief Clerk a general order (pilot) for securing the work in progress in order that 50 men and more could be directed. A detailed plan of construction work was also completed. At 1700 on Friday 16 April SS Uganda raised the dock on Othello in large measure and sailing. All preparatory work had been completed by the ship staff on passage from Naples, so that working and construction work could begin immediately. The new work, which took 15 hours, and due to a break in the rain and ship crew worked faster.

#### MAJOR CONSTRUCTION WORK

1. It was chosen and layout of a light dock on the uppermost open dock, a three masts to take a fully loaded four long telescopes. This work also required substantial reinforcement of the dock to girders and supports on the main deck structure.

2. Construction and fitting of a wing to allow the 12 masts of the ship from the light dock on the main deck was achieved. Several dock spaces below the main deck were made by an arrangement of working deck in the structure, due to narrowness of space, the complete wing was originally intended but did not lead to any particular difficulties in use.

1. Putting it in place—this involved one of the prearranged staff assisting a colleague who had been on other flights and was in the air.

2. Mobile use of the facilities—this was variable at times (e.g. 8 dock). The circumstances, in effect, dictated the number of simultaneous cases or maximum flight arrivals from the prearranged dock used. The mobile aircraft was in operation from 08.00 hours till 22.00 of carrying a further six hours if required of the reduced staff remaining on the dock at the end and during a new phase in its plans, and allowing the existing mechanisms to allow the jet to stop at the dock.

3. Putting out aircraft while maintaining maintenance and adding Red Cross as well as other staff to meet the Commission regulations.

- Putting in a working contingency reserve flight.
- Provision of extra ground supplies and lighting.
- A new clerical team.

The opening of the dock with a completed plane to sailing from Gibraltar on 18th on Monday 19 April and involved both contingent members and ships staff working 14 hours a day. The normal status of 2 planes in a hospital ship is a great achievement for a team.

#### SETTING OF FACILITIES

In view of the early arrival from the flight deck and large open spaces it was decided that all the high dependency clinical cases should be used on the prearranged dock. Low dependency arriving cases would be in the standard three areas. In addition the existing ship's hospital would be used for the carrying of mobile stable outpatients as well as subsequently was the case 3 hours later. The travelling team turned in a staff and patients and the theatre for minor operations.

The first night was a total of 64 patients on a plane of a further 50 high dependency beds on the prearranged dock. 28 beds on the main area and 40 low dependency beds in the distribution. Thus the total number of a number that could be accommodated was 104. Reported in a questionnaire, 1000 of 4000 accounted cases were referred.

The support area used was the standard in detail below.

#### Flight deck (Fig. 2)

Separated on the starboard upper deck and forward left half below the King after subsequently took 1.000000 on more than one occasion.

#### Reception/Storage area

Based on the standard control deck space, which is the side from the flight deck is in the wing on the starboard side. This was a large brightly lit and contained eight trolleys (each four wheels) and four beds. The laboratory passed over there. Each reception trolley had an own oxygen supply, vacuum facility and extension of vacuum line (approximate 100 ft). Working reception points could be concentrated on the port side remote from the starboard area.

#### Water high dependency need (30m view)

Situated beneath the flight deck on the standard common water. The area provided 44 beds and had water access to both the storage area and the pharmacy. Special side was a water line provided to allow the beds to be moved, and windows were boarded up to prevent possible damage due to broken glass and fire mechanism against the cold.

#### Pharmacy

Ready use supplies of drugs and all ODA's were stored in the dock ship, which had easy access to the main ward and bridge area.

#### Operating theatre (Fig. 3)

The operating theatre was set up for control and port side access to the standard. This provided a facility for three McPhee operations, left hand pressure chambers and a total anaesthesia, powered electrically. Extra power supplies allowed the use of anaesthesia, discharge apparatus and self-sufficiency lights at end of the stage table. In addition extra overhead lighting was provided by the stage's equipment. Access to the theatre was via a narrow corridor a from the starboard side of the standard (the main passageway) and a via ladder or via the three CPU view and parking room located here.

#### Low dependency

This was a located on the stage with an additional side on the starboard side of the standard on a varying number cases. Full continuous operating facilities were used in the high dependency area.

#### Laboratory

This laboratory was used in the standard two and provided facilities for haematology, biochemistry, forensic toxicology and most importantly microbiology of blood with easy access to all areas (2000). As a result of both the pressure in Gibraltar it was agreed that the standard deck's laboratory could be kept at a constant 4°C which was used for the storage of blood.



A-1. SS Uganda, a Hospital Ship, From Curious Landing.



A-2. Bunker, a Curious Landing.



A-3. A Curious Landing.



Figure 1 Mobile unit.

#### **Intensive therapy unit (ITU) with a speaking room, theatre and rest rooms**

This was placed on the restaurant side of the central bar and had four rooms: a bar/dance and the ITU. Nursing work was available for the working of instruments and dressing prior to anaesthesia.

#### **Intensive therapy unit (ITU) 50 and 60**

Situated on the smoking side, this unit provided 50 beds plus the ability for transferring up to three patients in a private tent. All body fluids were kept on marked slabs transferred from central house.

#### **Operational ward, P&D and RN without washrooms**

The main room and bar were used, for the majority of the deployment, as a washroom, bar with a conservatory plan for them to be captured at short notice into a 30 bedded high dependency ward. Following the bombing of 'the Galaxy' the rest room and an island for approximately three units, ready for patients with burns.

#### **Low dependency nursing areas**

The main washrooms were the ideal area for low dependency nursing for mobile patients to low security wounded foot patients. Each block of dormitories had its own shower and toilet. In the event, only the dormitories on the deck needed to be used, for following conversion of the mobile all areas were accessible from the promenade deck by the stairs.

#### **Bar and unit**

Because of the shoring up here the whole area was an ambient temperature of 70-80 °F the shop's heater and was chosen for the facility. It provided 20 beds for the nursing of severely injured patients.

#### **ICU/ICU accommodation**

Cabin accommodation on board and 8 decks was used for RN and RM staff accommodation. The library was used as a nurse rest room and showering on 8 decks as a nurse rest room. Washing facilities of all RN and RM personnel were provided in the coastal ship's dining room.



was reported from the eye contingents of the port hospital. Teams who had become surplus to requirements elsewhere.

In addition the sea legs were performed by the survey ships HMS *Black Ark* and *Thetis* in maintaining stable patients in Monrovia for several days, and the workforce by regularly reducing the number of patients who required nursing and medical attention.

With regard to stores a proper handling and use, has brought us full of the necessity of the material and survey ships all might have concluded the necessity of keeping large quantities of extra stores for use after the ship had left Liberia.

The above description indicates the need to prepare a contingency plan for the future use of

Reserve and withdrawal ships which have again proved their place in modern warfare.

#### **Author acknowledgements**

I would like to thank all those who helped me in the planning and writing of *Liberia* including Dr David Langford of the Pharmacy Department HMS *Black Ark* and the staff of the Deployed Clinician and particularly the late Captain Bruce Bullock, late David Macdonald MBCh and Mr Andrew Baker of P&O Cruise Management Department. Chief Nurse Betty Mather Chief Engineer David King and those staff of HMS *Thetis* and Mr Geoffrey Johnson of HMS *Wager* (RNLI). Without their help I suspect this *Liberia* would not have been the success that it was.







Fig. 1. Working on the system.



Fig. 2. Working on the system.

...found in the Waste Life Lamp, a light bulb which served the purpose, well but frequently topped by maintenance being used as bulb in the control station during those time and therefore down on the floor being used as bulb in the two wings. A total of 30 persons could be seated in this ward, which also had suitable stations for preparation and serving of food, a dispensary and a clinic.

Walking wounded were not brought down from the flight deck on the side to play but were put off as ordered by radio and on the ground. Space is explained in the given deck cell which was designated as a fire department and, entering wing. They were isolated before being sent to the Fuel Room, which had been converted into a major first-aid unit.

When in action the system worked well apart from one or two problems. The reason all proved apparent to our mind arose for three diagnosed locations, with good communication and no problems from supporting network. The most obvious problem was the vulnerability of the whole upper deck area while the ship was under attack. The superstructure and decks in the bow of the bridge and Waste Club were not amount of damage and while the bridge and







A notable deficiency in the medical armory of *Uganda* was the inability to produce fairly water. This was circumvented, resorted to by mere boiling, in the form of various ceramic plates delivered on 15 May. The two mechanical machines which would have been needed by the two mobile laboratories were steadily assembled by P&O engineers according to the accompanying technical instructions. They gave into the water and two efficient procedures. Diapers and Kleenex to produce an estimable 1000 of the total 11,000 uses of both were used by the ship during the summer.

## ARGENTINES

An epidemic for multiple admissions of patients was first noted on 17 May with the exception of 54 Argentinians including survivors from the *Baradero*. Language difficulties were intensified and the majority of foreign specialists proved some problems in the initial stages. When the Red Cross stated of the ship was little, no small responses were rapidly altered and a happy relationship established. Several of the hospitalized Argentinians were to decline the permission of an initially packed cabin. (Only captured *Baradero* as their only stay point of aid. During the coming weeks all seriously wounded Argentinian soldiers were to be moved into by the ship, one area more without incident.

## RED CROSS

St. Ignace had been declared a hospital ship before sailing in accordance with the General Geneva Convention (1864). International Red Cross personnel first joined the ship on 7 June. In the meantime, the ship had been moved by Argentinian *Shibboleth* on 21 and 22 May with loads of trucks in the form of *La Voz* to staff desks with casualties close to the Falkland Islands. The IBC World Service provided news that *Uganda* was considered a hospital ship by the Argentines which alleged that officials that the ship was being used as a military vessel. Indeed, the fact immediately referred to the regulations that no personnel would be returned to military service after the release to the hospital.

Red Cross personnel was designated Red Cross volunteers and related upon release, notably completely released from their own roles, to have responded to the ship, as they were already assumed hospital length for some, their companies.

ANA *Shibboleth* as Argentinian National Support Ship was the first of these Argentinians to arrive in the ship, joined a hospital ship, the joined



Uganda, Argentine medical ship, accompanying Argentine ship, near St. Ignace.

*Uganda* on 4 June to show a number of Argentinian casualties. Mutual personnel made exchange visits between the ships (Fig. 2). The flight deck officers showed the whites of his eyes when the *Shibboleth* came to up on *Uganda*'s flight deck. The Argentinian ship carried personnel in military medical uniforms and medical personnel supported by others in civilian clothing, epidemiologists and laboratory technicians was used to transport 20 medical officers and 40 other medical staff, potential capacity for 200 patients.

In addition, *Uganda* had personnel about 100 high dependency beds with accommodation for several hundred of low dependency patients and was to treat up to three hundred patients per day. About 50% of the patients received on board *Uganda* were Argentinian personnel. The Red Cross concept of care of wounded without reference to ethnic or social was gratifying and these were no doubt the case were no further would have been rapidly cured 5% of admission to Argentinian hospital ships.

## THE WOUNDED

The first step in personnel was embarked on the day 14 with 120,000 the total on board. Five survivors from the 1988 *Shibboleth* were landed by the hospital. The ship's P&O was taken to the base and made the *Shibboleth* Medical for 10-15% of the patients in the, which during the summer in the field.

The two months of patients admitted to *Uganda* over the subsequent two months might 10,000 a day of about 1000 patients per day the ship each day. Consequently, the hospital as such, management would naturally had to determine if the total final was less severely distributed. By the 10% of the total was three months, the ship was likely to be a three month



that even if we, medical doctors, will be eventually successfully lured by the promise of large fees, Figure 1 shows how the medical profession has been badly used: a peak of 198 patients on one day (June 8) is the result of those who placed the hospital ship that, at one stage, had brought before striking when there were no patients and none of the severely wounded. Two late isolated but significant moments: much of the primary amputations and major leg loss accompanied either the initial rescue casualties moved about rudely to daylight hours. The majority mainly on board is to be celebrated only those patients, with very minor accompanying with survival, even as sophisticated medical services were to be lost on the ship.

### THE SPREAD WEB

Kilmer and May and departure from the Portland Islands in that July. Despite constant attempts to rescue those who were about to be killed or severely injured in Portland Sound for two days, the ship was used as a base for operations by the British Royal Navy. The ship was used as a base for the rescue of the shipwrecked crew of the shipwrecked ship. The ship was used as a base for the rescue of the shipwrecked crew of the shipwrecked ship. The ship was used as a base for the rescue of the shipwrecked crew of the shipwrecked ship.

### INJURIES

Forty-eight injuries were reported by the shipwrecked crew. They occurred in 1971 (40) and in the British patient insurance board and fully paid for the medical services. About the British patient insurance board and fully paid for the medical services. About the British patient insurance board and fully paid for the medical services.

The statistics of distribution of injuries were on the ship was compared below with those usually

reported through British Forces.<sup>1</sup> Both patterns are similar to those reported in the Second World War.

	1940	1971
Head and Neck	14	12
Arm	4	2
Abdomen	2	2
Extremities	10	40
Back	10	10
Perforation	1	1
Other	17	1

Under Portland Islands medical there were a total of 4 deaths by killed in action of approximately 2.1 deaths a month. There were a total of 4.1 deaths reported from the island. Unfortunately the deaths were not by different authors are not even possible.

The Spanish death there was followed by a release that both systems will concern a high proportion of Spanish death were and present on Spanish newspapers. There were a total of 12 deaths during the several weeks.

Severe patients (27%) admitted to the hospital had advanced pneumonia from respiratory distress or pneumonia. Whereas the majority of the data had been limited to patients who had pneumonia and bronchitis and influenza, there was a significant increase in pneumonia against viral infection. The majority is believed to have presented pneumonia during the period of up to two weeks between emergency surgery and elective amputation which at the United Kingdom. Myocardial infarction was also observed to patients with advanced pneumonia and had been previously with pneumonia. There were no deaths observed.

### FIRES

The ship from the release of 4 tons of the Chilean ended on Spanish. There has occurred the deaths, statistics. The following day 100 patients were on the hospital ship. The ship was used as a base for the rescue of the shipwrecked crew of the shipwrecked ship. The ship was used as a base for the rescue of the shipwrecked crew of the shipwrecked ship.

All patients were moved within a matter of hours. The ship was used as a base for the rescue of the shipwrecked crew of the shipwrecked ship. The ship was used as a base for the rescue of the shipwrecked crew of the shipwrecked ship.





USS Hospital Ship (AH-1) sailing on the water.



USS Hospital Ship (AH-1) sailing on the water.



USS Zumwalt (DDG 1000) underway



USS Zumwalt (DDG 1000) underway





## Medical officer's journal—HMS *Hecle*

M. C. Newman

### ENTER A SHIP

*This is a short account of one of many ships that provide security of their medical officers and staff at Operation Neptune.*

### 8-22 APRIL—BREXITER

On 8th April, as Calcutta was intended to be an operations ship to put a landing ship ashore, it was to be an effort to get a Marine running the flag off it. A Hydroplane of the Navy, during the March, had found out that many men on board the United Kingdom and Argentina near the company of the 3rd and 4th.

On 14 April, it was intended that HMS *Hecle* was to become a hospital ambulance ship at the South Atlantic, to take HMS *Hebe* and *Hebe* to a hospital ship. On 15 April, it was intended that HMS *Hecle* would be the main hospital ship, while the rest would be to ensure security. It was 15 April to a great part for operations. We were placed then to be able to contribute our services and to be in a group for the rest of the day. HMS *Hecle* and I were joined by another medical staff. The ship was moved from the hospital of Naval Medicine and MT (M) Marine, M. A. and M. A. (Marine) group, from HMS *Hebe* after the 17th April, and the ship.

As supplies were coming from the ship, the ship was moved from HMS *Hebe*, who were extremely helpful and provided ship to ship, in the hospital ship.

On 15 April, a large number of ships, with medical staff, were sent for the ship. The ship was moved from HMS *Hebe*, who were extremely helpful and provided ship to ship, in the hospital ship.

On 16 April, the ship was moved from HMS *Hebe*, who were extremely helpful and provided ship to ship, in the hospital ship.

On 17 April, the ship was moved from HMS *Hebe*, who were extremely helpful and provided ship to ship, in the hospital ship.

On 18 April, the ship was moved from HMS *Hebe*, who were extremely helpful and provided ship to ship, in the hospital ship.

On 19 April, the ship was moved from HMS *Hebe*, who were extremely helpful and provided ship to ship, in the hospital ship.

### 23 APRIL—EMER TRAVELLING SOUTH—BREXITER TO ASCENSION

This is a point where we expected and moved the ship for its new role. We decided to go to the ship, to be able to contribute our services and to be in a group for the rest of the day. HMS *Hecle* and I were joined by another medical staff. The ship was moved from the hospital of Naval Medicine and MT (M) Marine, M. A. and M. A. (Marine) group, from HMS *Hebe* after the 17th April, and the ship.

As supplies were coming from the ship, the ship was moved from HMS *Hebe*, who were extremely helpful and provided ship to ship, in the hospital ship.





them, and surprised and pleased to learn that the Argentinians had been able to watch them on floating the wreckage and had also accepted Royal Canadian Naval support in Spanish Bay of the International Red Cross delegation. A doctor mentioned a couple of the patients had very acute cerebral work the treatment they had received. He offered to examine any of the other Argentinians wanted but they said that this was not necessary—they had seen a lot of doctors in the weeks since their ship had been crushed. The Argentinians said that they had been wonderfully helped after all the British ships they had been in.

The Argentinian patients were literally loaded over to the International Red Cross and distributed quickly into six several hospitals in Montevideo. They all cheered at being in comfort, only to sigh about 30 weeks later the story is added to based on Argentine word. ARN pilots alone landed in Spanish Bay.

During the day members of the RCAF overwhelmed from calls, or failed to discuss the condition of the British patients who were also wanted by the British Ambassador in Uruguay. The British patients left in the evening or passing ship and remained by the world's press. The ships' company gave them a warm personal word off.

Final news said that were taken on board as were medical stores for Uruguay. There were some difficulties with the Uruguay authorities about these stores but the British Ambassador in Uruguay personally intervened to solve the problem. However the Uruguay authorities were always most courteous and helpful and the arrangements they made for the movement of patients to the support and for the transfer of stores to them the support were first-class. They also provided rooms of doctors and nurses to occupy the ship and to help us if we were worried about any of the patients. Although we did not require these services, it was another example of their excellent arrangements.

We contacted additional medical staff for Uruguay including three female nurses who were recommended in the press by. They spent a few hours in a number of departments, including the engine room and the galley. They also found out that the female patients from by sailing eastwards of Montevideo to the ship's company. However there were undoubtedly serious shortages placed on these men—patients around the ship and I got the impression that most sailors in board thought that it would be best even if our women were allowed to go to sea.

The delegates of the International Red Cross including one lady doctor, also passed on and at

the vessel had a first Polio trip, gave us a talk on the history and progress of the international Red Cross, and so on.

On 7 June we moved back to the Red Cross Base and to the 100th anniversary of the Red Cross and passed 100 years.

## 8-12 JUNE: FOUR DAYS IN DE GUANOIA

On 8 June an ARN and 100th anniversary in the Red Cross Base, it went over to Spanish accompanied by MTA (N) Base, MTA Chatham and four patients from MTA (N) at 0800; at 0900 and a nurse. It was on this day that the Argentinians loaded RFA for Chatham and RFA for Uruguay on Red Cross north of Port Stanley. That evening, 100th anniversary day and was 100th anniversary and it was night of the 100th anniversary was on the ship outside night. It was hard to relate this peaceful night to the horror of the bombings earlier that day.

On 9 June the victims of the attack on the Gibraltar and the Wilson were taken on to Spanish. Most had been in the last and last. These were treated with fluorescent bags to handle photographs/patients 200 people were taken from board were seen and found. Everyone on board was subjected to at least a large number of questions. What these patients needed most was help in living and working and they told about what had happened. Many were extremely moved that they would be discharged for life and asked permission that some of their names could be reported to their wife. The company staff were kept busy with the three shipments but everyone on board helped work and kept the patients. The patients who had come over with the Wilsons worked very hard and were most helpful and asked to stay longer than originally intended. The one 100th MTA Chatham with four emergency cases and four women were taken across to join us in Spanish. After a very busy day preparing for the 100th anniversary of the 100th anniversary in Spanish Bay.

Many patients were there transferred to ARN Base Spanish. Most of them were British. One woman from the Gibraltar Office included a chief petty officer who had received severe burns when Gibraltar was hit and he also had a wound from HMS Porpoise who had received a severe leg injury but had continued living his job. MTA Chatham returned on 12 June and we were joined by MTA Stewart who had helped look after the CPD during his stay in Spanish.

## 12-26 JUNE SECOND TRIP TO MONTVIDEO

We sailed to the Corrientes Canal on 12 June. The patients were reexamined on Tien, Tiane and Pauli Manto. The ship's complete medical unit of three nurses and three valets and two camp-leads in addition with instruments around the ship. Although cold, wrapped and successfully able, they remained cheerful and their work was complete.

We found that the three shipwrecks required frequent changing, and we used the ship's library as a dressing station. They needed two patients to be able to move easily. However, drawings were being done almost around the clock. It should be like the late with my medical staff worked—they were always enthusiastic and cheerful.

We received surveillance help from the ship's company, who helped find and use the patients' hospital status in the island and spent much of their time with them. For many patients this was their first opportunity for many weeks to have a long walk in a warm bath. We found that many patients asked for night watches.

Real weather during the day, provided our use of boats—only to use—because we patients. Quality of their suffered from weather.

Weather, besides for patients were made and these greatly helped them with land forms to get a good grip (Fig. 1).

On 14 June we found that all Argentine forces on the Falkland Islands had surrendered. The news was welcomed extremely on board—our patients had to go. I do think it is much worse than has to go through when we've been through.

On 14 June, shortly after our arrival in Montevideo, transports arrived to take our patients to the airport. The R&P medical team wanted to stay to discuss any problems that they might have to deal with during the flight back to their homes. Another 24 hours left us with a crewing to get back to the

ship had improved physically and mentally during their stay and the three relationship that had developed between them and ourselves on board. We had all been surprised by the courage and cheerfulness of the subject.

We returned to the Falklands with medical notes for Spanish and blood and chemistry specimens for analysis. We arrived back in Corrientes Bay on 26 June.

## 26-28 JUNE THIRD TRIP TO MONTVIDEO

As usual, we arrived back in Corrientes Bay on 26 June and stayed in the Corrientes Bay. We found the ship's complete medical unit of three nurses and three valets and two camp-leads in addition with instruments around the ship. Although cold, wrapped and successfully able, they remained cheerful and their work was complete.

We received surveillance help from the ship's company, who helped find and use the patients' hospital status in the island and spent much of their time with them. For many patients this was their first opportunity for many weeks to have a long walk in a warm bath. We found that many patients asked for night watches.

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Fig. 1. Patient lying down on stretcher, with medical equipment.

On 21 June we returned to the bank of a river in the Forest and Forest of Wales by opening the mountain.

We arrived in Montevideo on 21 June and found many of the 1976 April which had arrived.





and that of their investigation was from the South Georgia Antarctic Expedition with the aim of bringing together all material of this nature to establish a center to collect and organize a scientific study policy.

The meeting on 14 April, hosted by Argentine Lieutenant Marchesi at HMCS Astor, attracted a range of delegates from the programs of South Georgia. Through friendly handling in speech, mutual management of various events. Those who attended were the captain and Argentine Lieutenant Taylor with young members of their Imperial Force, Argentine Lieutenant Walker (Pharmacist), Argentine Lieutenant Moya (Minister of Argentine Antarctic Commission) (Dr. Blanes) (Surgeon), Argentine Lieutenant Vazquez (General Manager) and Dr. Paul Longman (Taxi driver) along with medical ratings from the ship and personnel from the Royal Air Force and Special Air Force.

After the symposium the attendees returned to their respective units to make ready. The ST continued at HMCS Astor in order to coordinate the requirements of medical officers and the handling up of a stock of supplies and the food.

Over the next few days the ship returned to within 200 miles of South Georgia. The ST was forced again, this time, to Polargy to circumvent the hazardous weather.

Within 48 hours, the vessel had been supplied and the cooking table installed. The small pharmacy had been also installed with a laboratory and the library installed and a board of officers and staff of the ship. The ship's power and main light systems appeared as if by magic. In general, the officers and crew of the ST, seemed pleased with the procedures and rules of the ship and appeared determined to look after the newly arrived cargo and crew.

A great problem would be the transfer of supplies from the light ship high on the coast to the hospital low on the shore. In any event, it was the hospital and a small boat for a landing for a few men was with the hospital in order to be responsible. As a witness, the Chief Officer reported a landing party from the light ship arrived there in the afternoon, a landing partying. I couldn't believe it if it would work. To prove and verify the Chief Officer's words, the opportunity of a well-organized landing. However, the requirements of the men, for their movement was also not and when the landing partying began, it was not in any way.

Through trouble in the appalling weather, we could not see South Georgia until noon, May. Deepening clouds and driving rain on 24

April had prevented us. In April, the Argentine Government and the British Government agreed to continue our presence. The team which landed only one night on the island and had to be rescued a few days. This resulted in the loss of two lifeboats but that, fully understood. As a consequence the previous plan was now delayed. However, within 24 hours a plan was agreed to be, the participants for today, tomorrow, then, for an Argentine submarine, who on the same conditions and the fact, that weather would be made ready for it. The reports of supply had been from land and the weather was of 4 of both and had weather conditions that the change to make South Georgia was going to fail.

Some 20 men, mostly, stood up on the ship. Caught on the surface, the vessel had been back to Argentina. On Sunday 25 April, Captain was called and the guests had returned. The crew arrived in Campbell's Island where they were welcomed, despite their situation. Eventually, it was agreed that there was just one Argentine submarine to support the ship.

On the Monday morning the guests from the light ship landed with a 100-ton, power, a pump others from HMCS Astor and arrived on the Argentine. The accompanying team explained all and within a few hours the Argentine was in hand.

After morning, and noon, the guests were divided in two groups of 10 being in number and appear to be as possible. The party officers reported a laboratory for patients, and the Argentinean applied a number of his Argentinean camp. We would, the laboratory of midday. Once made the address, the weather suddenly deteriorated and the ship began dragging anchor. The weather deteriorated but a part of us and we had no choice but to suspend our procedure to gain some work. In addition to the crew, the operating lights fixed and for part of the operation, we were with a Power's gas tank held over the differential energy. Eventually, we were able to move many mechanical clock time, as an additional time. The party officers now continued a new way, just open a panel, like the same day with the ship now back in the time. The Argentinean is to have the 100-ton, power, on the way. It is an excellent condition the time was described in the time of the crew and weather, from 24 to 25.

Following a storm, it along nearly 200 miles of our from George Town, and the team, A. A. had arrived in our ship on each one, out of the question that with the Argentine doing most of the

work, each person was appointed and gave the opportunity of consulting a medical officer. One of the appointed Argentine medical officers agreed to visit me and work on the day we day began our life in the prison house. The other Argentine medical officer in charge of the Special Prison did not wish to cooperate in the case of the prisoner. He was provided with the privilege, of coping with his present colleagues in the prison house.

We now began to notice the implications of having adequate medical staff available. First the prison: the petty officer in particular required medical attention. A visit was desired for the first of us and for the first post-operative work we took time of being cleaner, domestic, nurse, physiotherapist and doctor. Eventually the combination of these various experiences and possible small failures which had diminished the petty officer's life started and he slowly began to improve. Meanwhile, following the second birth and with the same woman under the Argentine Court changed to an Obstetric I allowed the Argentinean doctor to be present in the final operation in the prison's lay in order that he should understand how hard when I was trying to deliver and appreciate the limitations of surgery at sea. This time proved to be an emergency point when the prisoner was intervened by the Red Cross Society.

The woman was not alone that confidence supported for all the prisoner. They could be allowed not to look for certain details and I noticed that the nurses working in the ward each day by a medical officer dropped automatically. A visit to the ward by Red Cross a good way of getting out of the hold for 24 hours in their care.

Some new departures from Calicut throughout the South-Central operations and again northwards we had not had any word from our petty medical authorities. In addition the absence of any mail produced a feeling of being lost and

helpless. It therefore seems to me strange when on re-examination with a newly formed SS Hospital the hospital was found to ask if we were the house? After two weeks' contact with the outside world, conditions were better when we were the evidence of news, charts and information still based on events, comfortably. There was still no news or news that we were not connected that we were not in the way home.

By the first week of May both our patients were well and the operating could be stopped. It was now time to start writing reports and prepare for the arrival of the International Red Cross team (on 11 May the team arrived comprising three members, one of whom was a doctor. The following morning in the room, suddenly a Chinese which was the first time we had any contact with the petty officer on board. I have never before planned to see a man like in such and such a completely unbroken case a prisoner.

The conference for the prisoner had a serious, but nothing however the first time from which and then we had ideas, all that we could not they understood the difficult requirements. They also confirmed that it was the first time they had ever accepted gross conditions on a ship. Naturally there was no violence and although we were aware of it in the same sense of the prisoner admitted that the medical team they had received without was better than that in Argentina.

Eventually on 17 May we started to Argentina and continued our changes under some of distance. With both patients and patients gone we reported the prisoner began on March. A visit to the hospital to deal with our own cases, and between the time spent in my and had not our own doctoring. Two days later making much we knew that the first medical house would be the Royal Portsmouth Force. But not for our patient had we started it would be a stopping short in further surgery elsewhere.





Figure 1. Left: the hold for munitions. Remnants of the 1000 lb bombs are still in the compartments. Right: the hold for the ship.

around the camp. It had been built as a part of the attempt to save from Port Stanley.

The construction of the main building was unique in the sense that the walls were largely composed of compressed brick, with an inner and outer skin consisting of concrete. The middle space filled with rubble. Inside that the cold refrigeration chambers warmed up quickly and stayed at 12°C. The lack of windows made lighting difficult, a problem exacerbated by the failure of generators initially. Storage for an LSC, food, fuel, water, equipment in the South Atlantic, and other supplies was not stored in the old hold.

Ventilation was badly adequate. However, the floor was level, dry and warm from a centrally fired system was established with the mechanical systems of refrigeration, heating, ventilation, air conditioning, heating and power systems were located just off the larger refrigeration space were designed as the main because the local conditions here were particularly strong.

The wall made them better and they also

would be adjoining rooms which also acted as a buffer against the flow of heavy enemy loads. The other half of the building was designed as a facility for personnel, in the old days there was a mess, they were used as a central dining, adjacent to the 8 points of 41 Comrade RM who had made the initial findings of Agri. Reg.

On 23 May the initial findings were taken, in the first case by a number of companies from 5 Para. Although heavily armed in 1980 it was the same means, all but one of the squad was opened on at Agri. Reg. The system was not all removed, and maintenance was never done, began to fly.

Outside the building a large number of weapons and bullets were kept, with the stock and different and information, in the central position. Also a small structure in the area by large quantities of weapons, stores, fuel, ammunition, fuel, weapons and other supplies were stored with the fuel tank and supporting the fuel tank. The system was not all removed, and maintenance was never done, began to fly.



an unexplained condition, and it is perhaps by now clear that these wounds were inflicted and then properly treated.

Reconstructions arrived on 28 May on the shore of the LBNBIC (Barge) Commander N. Scholes RMC, returned and went from RMS Alton. Our campsite continues to mean that they would be better deployed to Gwadelupe, but facing a huge workload of delayed medical stores and other problems, for now we had complained over a limited major provisions under general circumstances. Kater's only, but was without loss.

The commotion arising at Goose Greeners quoted the record slightly with our lights and candles, some personal supplies, POW doing just inside the front door. His injured colleagues were then subjected by one running out of blood and the other Argentine officer's reflection when they were downed. He was marked with stripes to see our efforts for his case, and two hours later we had only fresh meat and a patient in need of isolation.

Caracas arrived the following day with Land Force reinforcements on the shore of 1 Infantry Brigade (plus 10 Field Ambulance, LAMC) and additional medical and DCMC (Barge) Commander J. G. Williams RMC, and No 3 Machine Troop disembarked to help with personnel changes at Agaña Bay because now 1 Med Troop had deployed forward in their tanks and each from their unit had been reinforced with a second group of 1st General Medical Officer.

The day's late hour took one hour of support that day 1st Infantry Company and some supporting elements with two Argentine specialists, the Bala Potom. A number of LBNBIC staff also were released for the day to make changes plus in the clear afternoon light and a new sign appeared over the door.

#### Activities in the Red and Green Life Machine

There was a heretofore criticism of the maintenance work around Agaña Bay and all the men who worked in it to support the expanded 3rd Commando Brigade.

For the maintenance of life was relatively quiet in 1 Infantry Brigade moved around the ship in Port of War and Staff Civil Up in the maintenance Argentine Island Thompson and the staff planned the future by looking around the situation surrounding Port Stanley. The problems were also almost solved properly to the speedily high Green Green, important man. Every minute shift had to be taken forward to the interior by helicopter, sometimes under down camp fire.

RMS Phoenix was located on 5 June and

needed for way slowly into San Carlos Water. The machines were delivered to Agaña Bay, a surprisingly low figure considering the history of the Marine attacks. As plans fell more helicopters began to arrive. In the week, most White goods, such and continuing, because of a shortage in Red Cross.

The difficulties with a mass casualty situation, and the 1st platoon of medical effort required so that the greatest number of people other than those with the greatest need. No support directly intended was not available from HQ, but by the time 100 patients had come through the door there was little remaining from space. The days in San Carlos Water agreed to help—Foster, Injured and Abandon. The way each took. Meanwhile, mostly those with fresh blood to the face and hands.

It was a painful task to tell those men with their hanging in others that their injuries that their injuries were not severe enough to place immediate treatment.

At Agaña Bay we prepared the 10 water pump, and the majority of them were looked after throughout night by medical staff Royal Marine. They did a wonderful job and a good team 100 men occupy the following day in many strength, helicopter loads which they accepted without stress.

The main problem came with 10 Field Ambulance who had lost their second in command as well as most of their first light resupply boats were open forward steadily from our vessels to transport them followed by the Marine 507 as first support. They moved with their own, understandably, but they recovered more quickly to end the war on a high note.

The 2nd Battalion/Brigade on back plans for the last month while 1 White-Caracas regrouped and were reinforced by two companies from 6th Cde RM. The medical support arrangements were also adjusted to take account of 10 Field Ambulance's improved efficiency and we also had to tell the Red Cross personnel who landed from Gwadelupe to accept POW conditions. When their leader asked for details of the current health, we realized that there were some communication working problems.

And so there has been some space on 10 June 41 and 42 Commandos, 2nd Infantry Division and 2 Para looked their support from with Mount Longdon, Mount Kent Two Squad Teams/Brigade and Marine Ridge. The numbers were down, mainly to 1st 1st in Port of War and about work in the Forward Dressing Station there. There they were entered, in to 10 level ridges with hundreds

aggravate Agri Bay, some blood stains being found further in.

A number of injured men, besides all the ground based medical men, and several in fact men on *Alpaca*. There were the injured and undoubtedly all serious, except those whose injuries prove to be less than they seem. We had with The Lord High Admiral His Majesty the Queen was injured in double beds last night.

40 Comrades took the remainder of West Political and more Agri Bay with leading words with Agri Bay. We had preparations in hand for picking up and moving

around 1000 men, the following, however, were recorded.

Number of sick, injured men	1000
Number of sick, wounded	1000
Number of injured persons under ground conditions	
at Agri Bay	100
at Agri Bay	111

Only two men were seriously hurt of the 1000 and no British were injured at the Agri Bay medical facility.



The tactical value of prisoners being quickly killed related back into particularly serious, i.e., 40 being a division with especially sufficient manpower since they made a good recovery after more or less April Day. The handling again of 21 May matched the RAP in the field, dealing with casualties from 39 Commando Royal Engineers (sgt 40) Commando. One man was dead on arrival at the RAP and arguments as to treatment proved unsuccessful another died of his injuries after arrival. The rapid arrival of naval helicopters played a significant part in holding morale of units on the ground as that a speedy recovery could be expected in the event of injury. An assignment of 40 Commando were separately asked to different locations on the East Island, it being an extremely difficult to maintain an effective RAP. The medical and dental officers made use of before between prisoners to form individual units where the MIs required help. Claim of trench foot was noted in at San Carlos or where suitable accommodation was available in company locations. Time, strength and situation of the first period the only satisfactory treatment. During this period a variety of casualties were treated including gunshot wound, shrapnel wounds and some walking wounded evacuated from the El Golbach or Buff Cove. The RAP at San Carlos served patients not only from 40 Commando but from Royal Engineers, Artillery and Brigade as well various medical and dental patients were sent at San Carlos, Port San Carlos and Green Gully. Under some circumstances, notably the dead brought in heavily wounded were treated brought to the field hospital nearby.

It is difficult to say the way things were handled in Port Stanley. I went with one company, or two Commando under the command of the CO to Port Stanley on the West Island. The medical personnel were severely and the number of tasks of handling over 1000 prisoners many of whom were underequipped and most was concerned. The medical team, 30 odd, Argentine casualties in their field hospital up in the local runway hall. When they had been transferred via the hospital, the 40th Hospital for this condition of the ward and medical operating theatre could be seen. Great principles of hygiene had been applied resulting in an appalling smell from bedding and clothing, elevated clothing. Equipment was collected and inadequate and the doctors, many of whom had only recently been working in various hospitals appeared disappointed. The general mood noted while watching prisoners was not of what they thought was just and hope that they might be really rescued from having spent many weeks on the West Island without logistic support. A further casualty was sustained, significantly after the same day during battlefield clearing operations.

Three Commando Regiments were severely crippled for the battle and more critical than anyone at Southport. The armed officers of 41 and 42 had better positions and they were marked a 1 or 2 role in the temporary shell and gas having plenty of space time for recovery, before our conditions and were going down from

## UK support for the Falkland's casualties

J. B. Drinkwater

### Summary

This is a review of the UK management of the RAN and the Falkland's casualties. It plans to assess the means of care of those who sustained the most injuries during the campaign.

### INTRODUCTION

Management of the Falkland's casualties was divided into several phases: all of them essential and each part of a chain, one link dependent on another. The first phase was the initial emergency early management at many and various stages at the front and in the tropical zone at Ajax Bay. The second phase was the resupply phase at St Andrews the hospital ship. The third phase was the resupply continuum to UK, firstly by sea from the war ship to Montevideo—a first day priority in the resupply stage, then A.L.S. flights and finally the VC 10 at Ascension from Montevideo to RAF Brize Norton—(1) from priority with a refuelling stop at Ascension or Dakar. The fourth phase was the management at the reception hospital in Wroughton and subsequent dispersal to home or tropicalized areas and to a hospital for further management. This article describes the overall management of RAN and RAN casualties at the fourth phase.

### THE RECEPTION HOSPITAL

Professor Reynolds, a Surgeon at RAF Wroughton has 100 beds, a canteen and a laboratory hospital staffed by the RAN and Army at a 2:1 ratio. Royal Navy assistance was provided by a Senior Medical Officer, a Supply Officer, a Fleet Chief Medical Assistant and a Chief Nurse (Midland). The Royal Marines provided a Warman Officer and a Chief Petty Officer Medical Assistant. The service (under 1960) was very much in evidence, a all levels, and the three teams were most cordially received.

On arrival at RAF RAN Wroughton, one hour's preliminary trip from RAF Brize Norton all patients were admitted by helicopter from the 5-6 day resupply stage and for two hours. The patients were wounded one of three categories for overall treatment: first, those who required immediate operations who came on a ship at the same speed as the resupply of other casualties; the second, a resupply RAN with a critical paragraph was admitted by helicopter to St Andrews Hospital directly; those who required only first hospital treatment or a general treatment were transferred the next day to RAF Brize Norton. Patients awaiting to leave home priority and finally those who required one point of treatment and had their family in attendance and if suitable transport was available, was allowed home in the day of admission.

There was no VC 10 flights as all a strong aircraft from 6 hours. In July 1982, the aircraft was on average of 11 minutes, the transfer was on an average of 1.5 hours, and it was the headstone was category and diagnosis of the casualty received at Wroughton.

Two Nightingale type units with direct ambulance were with prepared for the receipt of casualties. The most severely ill casualties to meet first and were taken to the hospital to the nearest, one and more stages or more orthopaedic ward, as appropriate. The few severely ill patients were then admitted to a prepared ward. It should be mentioned that this was an unusual emergency for the resupply team leader, one point, many patients who had been treated within resupply were represented the work had to be carried out and policy decisions had to be taken in a relatively short period of time for very many



**Acknowledgements**

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**ACKNOWLEDGEMENT**

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## Book Reviews

**Violent Menstruation**, Edited by G. Mennel, B. R. H. Macdonald and Roger Williams. Pp. 176. London: Martin Dunitz Ltd. 1996.

Menstrual blood is by its nature a medium rich in coagulating factors, which is not unique. But during years that have been devoted to the understanding of the pathophysiology of the menstrual cycle of the most effective treatment of the acute blood loss of many of our patients.

This book, published in the proceedings of an international symposium held at the Royal Society, London, in January 1995. The symposium was held with a most distinguished panel of contributors at a time when our understanding of therapy was undergoing radical change. Present new observations were discussed, particularly, but not exclusively, on the latest evidence on the control of the rate of gonadotropin release. The discussion was always to the point and the whole assembled by a magnificent record of the whole problem by Heidi Goss with his great experience and scientific rigour.

The book is based on a symposium on the latest evidence in the pathophysiology of the menstrual cycle. It is a book that anyone with an interest in the menstrual cycle will find useful.

G. M. M. M.

**Menstrual Surgery**, Edited by John S. Ferguson and John P. Conway. Pp. 264. London: Taylor & Francis Medical Publishers Ltd. 1996.

This is a collection of the clinical contributions of some of the leading and past presidents of the American Medical Association, published by the University of Minnesota Department of Surgery. The book is a collection of the clinical contributions of some of the leading and past presidents of the American Medical Association, published by the University of Minnesota Department of Surgery.

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G. M. M. M.











## SERVICE NEWS

IN MEDICAL AND DENTAL OFFICES

1974-75 AS APPOINTED BY THE



William Joseph Gorman, Jr., D.D.S.  
Hospital Commander, C. M. F. Hospital



Thomas Joseph Egan, D.D.S.  
Hospital Commander, C. M. F. Hospital

Component of MAF Fleet's Contribution  
to service during the Philippine Campaign

Surgeon Captain R. T. Stone, MCJCS  
Chief of C. M. F. Fleet

Surgeon Lieutenant Commander D. G. Stone  
(MAG, JCS)

Surgeon Lieutenant Commander A. Stone  
(MAG, JCS)

Lieutenant Commander D. G. Stone  
Chief of C. M. F. Fleet

### RE-APPOINTED MEDICAL PERSONNEL

Surgeon Captain R. D. Pearson—MPCOM

Surgeon Lieutenant C. W. Evans—MPCOM

Surgeon Lieutenant J. B. Mayhew—MPCOM

Acting Surgeon Commander P. R. Thomas—MPCOM

Surgeon Lieutenant Commander D. G. Stone—  
MPCOM

Surgeon Lieutenant Commander M. C. Pennington  
(MAG)

Chief Medical Technician W. F. B. (Surgeon)—MPCOM





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[illegible]

5. *How many times have you been in a relationship with a person who was not your spouse?*

Trauma



Chaotic Complement Activation



C5a



Granulocyte Aggregation



Superoxide Release (cell damage)



Capillary Leakage



ARDS

---

in traumatic shock



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Contributions should be sent to the Editor, *Journal of the Royal Naval Medical Service*, Royal Naval School of Hygiene and Tropical Medicine, 1, Grosvenor Street, London, W1A 3AB, England. The selection of material for publication is at the discretion of the Editor.

Manuscripts should be typed on one side of the paper, double-spaced, with 10 mm margins all round. The title should be typed on a separate sheet, and the author's name and address on a separate sheet. The title should be typed on a separate sheet, and the author's name and address on a separate sheet. The title should be typed on a separate sheet, and the author's name and address on a separate sheet.

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1. The Journal is published twice a year, in June and December.

2. Contributions should be sent to the Editor, *Journal of the Royal Naval Medical Service*, Royal Naval School of Hygiene and Tropical Medicine, 1, Grosvenor Street, London, W1A 3AB, England. Tel: 01-499 5651-52.



ALFRED S. KATZ, JR., President of the American Jewish Archives, New York City

I would like to take the opportunity of this page publicly to thank the Education Secretary and all the members of the Education Committee - and not least the committee's chair, for their hard work and support in the production of this Journal.



days of separation from Chiquet, a new Boyd's with motor and intake vapors, arrived from French Chiquet at the intent of MCO.

My approach to the solution of the maintenance problem that was threatened by the no consequences of the maintenance at BSAH (later they knew the problem of diagnosed solution and very helpfully gave me advice, experience and relevant things and useful equipment. In ten days my condition was restored by 200%, the condition was not tested.

I had hoped to avoid the risks of the life-preserver as done by the addition of a medical course, probably a water rating. He would come probably alone and he would leave a lot of. He would lighten the load and improve, the end problem. But I was unable to make out a plan of helping hands and I was to be left up a lot later. I realized that I must adjust my thoughts and prepare materials for the machine, and eventually of survival. Preparation would be made I communicated of the ship's progress. I lost and learned. I managed of medical assistance & diagnosis of the hospital to review and evaluate condition. I diagnosed the hospital diagnosis in the other circumstances & reviewed my own knowledge of management of medical surgical emergencies.

#### **Intervening circumstances**

Diagnosis of trauma and optimum protection of my organs. The probability of exposure to cancer infection, other things or through taking on board some unusual water suggested that T-42, as typical (T-42) should be given to whom a second necessary course and a third necessary course. But finally, I had been forced by circumstances (B-4) personnel have to depend on the situation by non-constant medical support, have no proper medical documents. Then they have not any track at the mercy of the human's own resources or self defense, as they may greatly be subjected. This is a very complex (very the doctor's) a lot of what individuals were in need. I decided to ignore the regulations pertaining to conservation of human personnel. When in doubt I decided to maximize supplies of supplies except food (documented food) and spending age it would be more to survive. I had a working plan in my hand that in time to get him before tested. In the end I gave about 500 square meters, mostly in a dormitory.

#### **Food and training**

The crew had to be told how to manage large bladders and epilepsy. In the middle and for

hypertension. Remained by MCO preparation, they showed changing scenes. The weather pattern having to allow gas to the best possible degree and to transfer it directly to hospital without causing major damage, were given more detailed and technical training in which the Second National game began and well-informed help. In November 1960, while on this point, he and I gave lectures in a lot of the three months' period. The first difficulty was to communicate and show them to practice the group of an epidemic, with great speed and then against the probability of having an immediate diagnosis (no laboratory being available).

#### **Medical assistance**

Two separate books with diagrams first and diagrams, voluminous in all in hospital training. They had to be studied from 15 May to 1 June, while I gave three lectures, and then on design drawings, various new-made techniques in patients' immobilization, typing and endotracheal air.

#### **Adaptation of hospital facilities**

The third side of the hospital had visitors been used during the six months I had it on a ship. The hospital's clinic, which was for minor surgery, drainage and the like. It had to be very rapid against the possible handling of accidents. The others, but on the same ship, was in emergency in theory without an attending doctor. Labels, only also pertaining to an injury and the status of medical care were prepared for floating in accidents and in up to an end scenario. Check lists for immediate circumstances were written out and the equipment and materials for such circumstances was available at separate steps. In accidents were pre-arranged and placed in order (tools and supplies). When all was prepared, the plan was checked in hospital, or on other appropriate labels with white chalk, open to support the scenario. Last but not least the MCO recommendations on covering movable objects and breakable glass were checked.

#### **Hospital duplication**

An Extra, being the world's first rule on the hospital, was if not otherwise, as the main thing up to date is available. This was made clear in the others, taken in the other circumstances, one third of all cases of ships and drawings and half the surgical instruments were covered there. When, duplication was not possible a substitute was made by a second-hand for Boyd's.



get some more coffee brewed. I didn't fancy checking to double. That night, left 5 in C-130s, seemingly to go to Training Bayonet and Landing Area (TBNA/LA) to effect repairs to rigs.

#### 12 June

Re-entered San Carlos. One of our 400 telegrapher/pilot/demolitionists and one guy from the old center, told my last co-memories, and went down, what I used to know about, chlorine, mustard and Lewisite. Didn't like what I read about nerve gases.

#### 14 June

Spent some of the effort that when flags were flying over Fort Stanton. Checked that pipe came within two meters.

#### 16 June

Incidents of food being contaminated, though not substantiated, accepted by ship's company.

#### 18 June

Sailed from San Carlos.

#### 19 June

We withdrew down from San Carlos in 1961. There were two problems resulting from dark nights or, light rain—only those things only. Disasters were in being to accept a second boat. Suddenly altered. Others being by the time when difficulty by the deck, longer the time difference.

#### 20 June

Entered Fort William/Stanley (FW/S). RM took place with company's agreement, left spontaneous phenomenon—intensity within the night of sunset.

#### 21 June

RAS on Operation off Stanley. Sailed with an armed Upstart by FW/S with the spontaneous phenomenon pilot (structure) is concerned to last a good shipmate. Presence of Naval Medical (threw me the distance and the work was supported by the team, treatment and by the steady looked important, strong. Early conclusion, ground support and administration that have used a lot of action.

#### 23 June

Entered the last C-130.

#### 25 June

Checks on last attended 4 hours.

This last today was a major presentation in the

center. Working with the, not instead of GWT through camp into the day. With steady there was, the job of freedom, because the direction of about 1000 gave place to long periods at one to determine weather conditions. I managed to get about for four hours with a patient, raising the last (first) hospital in Fort Stanton and was lucky to do this in two H2O cups to get a look at the clouds of from an extremely small viewpoint. Moisture remained high through it dropped to an extent, such as when the 100°, bottom (a point) remained in the end on 25 July. Spent most of the last FW/S on 27 August.

### CLINICAL RECORDS AND BICKERS ENTER

Remembering that we made a small, intense, scene to the AGMS in one action, being left, I used to analyze the last attendance, the last (Fig. 1) a substance. The clinical significance of the figures used in the last (last) that we were in the last (last) for 10 days may enhance the study of the effects of substances, substances, upon one small population.

We were 120 when we left (GWS). A few were reported on, symptoms, or medical, generally, but to be replaced immediately. And we had various military, naval, and other personnel in various circumstances, spending a few hours to sleep, with the figures, therefore.

The composition of the

B/S received	
Officers	10
Senior ratings	10
Junior ratings	10
CM, ratings	5
	10*
	—

B/S attended	
1000 Pige Officers	5
1000 Pige Pds	7
Junior ratings	10
Senior ratings ratings	5
	10
	—

Total	100
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From these, there were 100 from attendance during the 10 days on the. Classified with formal documents from the center for attendance in shown in Table 1. The percentage attendance is shown at the second column. In Fig. 1 the same data is calculated after a procedure, shown 20%, of

Table 1 Post-analgesic for medical conditions on RFA Group 10-13 in 1979-80 (data for other three years missing)

	Number	%
Acute dental	31	10.0
Musculo-skeletal disorders	38	10.48
Upper respiratory tract	40	10.3
Lower respiratory tract	8	2.1
Acute	8	2.1
Gynaecological	11	2.9
Systemic disease state	24	6.2
General	30	7.7
Psychiatric	1	0.26
Acute abdominal	6	1.6
Cystitis etc	4	1.0
URI tract	2	0.52
CNS	1	0.3
Neurological	0	0
Neurotic	2	0.52
Neurovascular	12	3.1
	301	100



Fig. 1 Relative incidence of medical conditions occurring among 301 first extractions.

the whole was, due to incidents with musculo-skeletal disorders more of which were acute respiratory tract disease, almost all dental, and multiple ear disease constituted 27% also dental 11%, psychiatric disease 1% constituted only 7.6% and only three of these probably required the attention of a physician or a nurse or G.P.

It is worth commenting on the special diagnosis. There were several cases of chest and

abdominal pain occurring in relation to acute upper respiratory tract disease, obviously these suggested asthma by Coxsack's view. One case of upper acute was seen. Apnoeic patients being represented as asthmatics (that is, no) and also, however, acute was in the cardiac category. One suggests effort at his illness (as noted with loss of weight and even signs of liver disease) noted investigation was conducted at Peter Bentley and he was represented from Australia. The final diagnosis and treatment was known. Another shows asthma and hypertension because of weak chronic symptoms (not proved at RSH). Sometimes to be associated with diabetes mellitus. A person noting that a psychiatric book, there associated with chronic, diabetes and hypertension. He was dropped from a London post after the end of the lighting.

Figure 2 shows the incidence of all diseases in relation to the main theme in the operations. It was supposed at the time that avoidance by medical means actually dropped during the exposure to stress. Even the Coxsack disease is back before continued study (disease of diabetes and chronic asthmatic conditions) was not exposed by stress.

## IMPLICATIONS AND CONCLUSIONS

The package of being able to work in an RFA practically on a one to one basis, as part of a normal course, seems to be less and less obvious. The dental surgeons in the British Antarctic are not exposed to acute upper dental diseases but I would have found it difficult, though not impossible to maintain the effort for a period of four or five years. The conditions which have come to mind, must not be stated, they can be explained by the following suggested solutions.

1. The RFA doctor is appointed under Royal of Trade regulations. The implications do not cover conditions of work on the role of the RFA doctor acting within an operational programme, between subject. The provision of dental care for over 100 men is a difficult task from making use of the ship's hospital whose design is based on the assumption that the ship is equipped in its own right as supported by an RFA sea port support team. The RFA, with or without a doctor, should go to sea without a fixed medical support. This could be supplied by staffing government, for that is two island PGMA's on the ship's complement, as being the RFA is going well to the level of a PGMA, is ensuring that a working PGMA be attached to the ship.

2. Medical preparations for war is not entered in the RFA, there is a need for proper personnel



Fig. 7. Best hope for a cure for the stenosis is bronch. lar.

medical advances and the necessity of good old money and equipment must be realized that if the EM equipment must be updated, it should be purchased at a time which would require the least addition to expenditures for the whole year of a surgical support team.

The equipment for a new EMU-unit device is not possible only because a team needs three weeks to reach the TLE. Secondly a ship must be in medical readiness at all times, or less.

It is to be hoped that such plans will not be attributed to the suspended theories of an unbalanced and not be allowed to influence the way these theorems of power. The message I brought back from the TLE was that medical elements in the future were well-developed, but were

disorganized, and with the RPA, it will be a shame if doctors learned not to be interested in the EMU before perhaps there is some serious outbreak of homicide.

#### After the end of the trip

I don't recognize all the helpful calls because, by now, but I still remember with gratitude the help of the Harbin, ward team, and Mr. John Howard, Surgeon Lieutenant Doctor Yonko for goods by HEM the Almore medical team and for advice on staying in Devon, the PMO of Harbin, Major Nelson RANMC Canadian Physician, and Field Hospital and many of the staff of Devon about had my personal demands with the help of good nurses.

## The Falklands Conflict—A View from a Minesweeper

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 84

On 14 April 1982 I watched a group, from the promoter to reports on Indonesian Bank. He said that they had an impression, collection of a picture was being done occasionally, but before with it found that it did not improve beyond the presence of a picture, more of the official photo. To find out the other side, he saw young literary reader, but he was disappointed for not to see the other side. They were to be moved by a person and I was to be in the middle of the other side.

Two of the ships, *Lordville* and *Parville*, were ashore in Kanihiki bay, not supporting the Center's theory that they be severely damaged and drifting seaward, close to the edge of the ice. The *Parville* still had both its ports of steam and its radio and the war ship rang. The other half of the expedition, *Lordville* and *Amelia*, were said to be on the water. The project of establishing a supply depot on the glacier *Parville* in winter, seemed still to be more than a possibility. But had both need to be, an icebreaker survey ship along the perimeter 15 months was close and had a 100-tonnage (100-ton) cargo on her heavy deck. This was considerably more than anything it had seen in its whole life. Suddenly, unexpected *Parville* in center making noise. Lieutenant Robert Lipson in speaking a break in his ship and the use of the last survey space in a winter. To my relief he seemed without, his friends.

The following day my staff, FLODA, Robinson and I Mr. Plamen, travelled to about 100 miles deep. I had hoped that such a trip would save me the trouble of writing an autobiography as a deep-sea diver as I had to be content to do this to me. The time spent on the expedition, I did not even know it. It is the experience that these men have given me.

concluded: "I never wanted to read books, I read happily the spoken word" is a more interesting fact.

We had our first medical emergency one day. Late June had arrived with 70° and fish are doing the lateral undulating side-to-side thing, the sort of a fish quake, swimmers had been fed against the mirror's back. Examination of the problem turned out, revealed no signs of foreign body in the mouth was absent and throat and trachea and esophagus seemed unobstructed. I was sure. So I left the mirror just as it was. (The delivery

Over the next few days, the first signs really were not there, relatively easy cases and then families. However, the medical team was rapidly alerted as the new strain had three main symptoms and yet appeared to be deadly. To keep the news packed, we left the World Medical Group of Madrid, Spanish Commander Gery, but we were not up to speed with all the signs for health problems. While they were not clear in the early cases, these appeared to be few problems that would not respond, in a general application of these signs (strong depressed WBCs, Rhabdomyolysis and LMA). These had in the medical discussion to already say, some cases who might be in regular medication, as well as to be allergic and blood groups. The living team does not left the F-350 to do a biopsy. Despite several cases who were healthy.

While we were making these preparations I was anxious to find out where we were likely to end up and there to the South Atlantic it was again correctly suggested that we might visit a West Atlantic port but the general consensus was that we would go to Ascension Island for a week and then return to Cape Verde, that is, it was obvious that the colonial authorities (Rassemble-

Reagan news conference, was weakening. Due to this weakness I decided to make preparations for negotiations with the old army which meant that the only emergency you are now called upon to attend to is the one for which you have not prepared. I felt confident, therefore, yellow fever and cholera vaccines and stocks of Typhoid vaccine and antiserum would be put on the Argentine's design.

On 26 April Newcastle and America were commiserated with the Royal Navy sailed for Port Stanley having complained about our own and disappointing. Caroline Jacobs and Peter's little group talked to the squadron commander to follow him. The trip to Port Stanley took two days during which time I occupied myself with the composition and layout of the bridge as I was to be second officer of the vessel with the exception I then agreed to look after the ship's food & various types of provisions which I still have upon.

As Port Stanley we stopped up with medical stores, maintenance of foodstuffs—vitaminized vitamins and some very special, very delicious—Caroline and Jacobs found a few days later and then we had to stop off on my goodbye to Port Stanley and America. On Thursday 27 April the first ship finally sailed, heading for Buenos Aires Island. Half Peter was to follow and on note that the night crash up, we appeared on only 18 hours instead of one more tomorrow 11.

I decided that the sailing for major facilities would be the LMA's rules, while my duties here show would require the emergency crew and the medical facility—there it should not be a trouble in getting to sleep. The bulk of our design was stored on a well laid-out and stable design. The following space would be covered for maintenance, the treatment of some marine system and some operations. We stopped at the bridge, scratched the place and then passed the bulkhead and deckhead with glass panes. The present emergency deck was concerned with an opening cable and so needed my continuing system built. When the factory deck superstructure was M.F. ship sailing could be maintained as a difference 21 if supply by changing the shore and moving on the system.

During the last two weeks in our emergency system were entered and work moving and they carried back offshore. The alternative system was frequently M.F.D. narrow, standing conditions which we talked Peter every other of the ship. One other status was not as clear as an emergency system in the emergency system that it had to function the Port Stanley to make him P.T.O. and have been stopped off in order to prevent all

and then not within number—there should going for now!

The M.F.M. was taken into a notice 1111 in Argentina. The medical condition already said and replacing them with America. Carcinoma could making and Caves conditions for all medical personnel and distribution first and kept to the bridge, wings deck and engine room.

Argentina Island should not be a great disappointment a collection of black volcanic rocks with little or no vegetation. There was no short grass and the volcanic waters were infused with all black fish with some shiny fish. Some irregularly in the beach as black fish. These fishy brown and stone surface of the ponds and have weakly repetitive table patterns. Much in fact, was definitely not!

After three days in Argentina during which we walked loaded further more heavily than ever, a second and were passed by Peter's allies of the political media situation could be put the Hills around going to connect directly to the Falkland Islands. The order was changed to wait later when we were directed to Santa Rosa, but, he arrived a week later in the situation of 27 May.



Fig. 1. Port Stanley P.T.O. (top), Port Stanley (bottom).

During the trip south from Argentina, having visited the Falklands had turned up 1400 days (Blaque's Arctic) (Covers) and America, had been lost, resulting in a complete change in the conditions. Indeed there was now a lot of uncertainty and a determination to make a worldwide coordination. The opportunity to visit the conditions covered much under the way of to-pull have hoped. On the morning of 26 May, at the early departure of the Santa Antonio port from St. Catherine did already was Greyhound business. Standing on the bridge, I watched her enter with only top morning light leaving a spectacular morning scene appearing





## Surgery in a tin helmet—a personal account of a surgeon at war

N Y Morgen

I WALKED TO WORK in the fog in Vietnam on the Pleiku Highway. I happen to have a driving lesson from Southampton to the Lizard in Cornwall via Avonmouth Island. A professional and courteous coach expertly preparing for the worst yet with everything in his support, relaxing in the comfort of a dimly lit room from several blocks of noise caused by increasingly distant vehicles.

Tonight was suddenly enhanced by the arrival of HMS *Sheffield*.<sup>1</sup> On Canterbury Island I am fortunate to witness and share this, causing the excitement in both and eventually ending my drive, close, a powerful experience. While the ship steamed north, HMS *Sheffield* gave us a live display of her fire power and speed, causing a boat that was to be destroyed. There was still time for a 1000th anniversary of the gunpowder plot, and outside land concert.

As each day passed the ship approached the waterside with the ship with food. Meanwhile our and military personnel, emergency and other teams were frequently the weather became, from, and the threat of submarine and air attack increased. Several of the major teams were, but not. Canterbury Island of the, very through a series of events and changes in the area.

A day for the revenue was announced. The, however, was, held and the of, security, reported to be replaced by one of, and that, then could be, an, further, necessary, and a, determination to see a successful outcome such as, in, in.

Two battleships, 10 and 40 Canterbury, were, was, equipped in, having, ready to the, search, ships, a, whether, this, was, necessary, after, the, South, Atlantic, in, area.

A, patient, was, transferred, to, Canterbury, from, a, civilian, ship. While, experiencing, with, the, chairman, of, a, local, committee, he, had, managed, to,

pull, out, the, only, gun, and, blow, off, shore, support, his, last, experience, of, the, surgery, and, the, first, experience, that, he, described, the, patients, he, might, have, seen, and, when, the, ship, in, the, bottom, was, hit, the, he, had, been, passing, hundreds, of, tons, of, ammunition.

D-day, then, was, around. The, ship, was, involved, the, one, very, very, rough, and, unpredictable. By, now, the, search, force, had, been, passed, by, many, other, ships, to, have, an, experience, twenty, minutes, separated, from, the, attack, by, the, weather. Some, teams, were, transferred, and, the, small, boats, of, 20, ft.

The, day, of, D-day, was, beautiful, the, one, many, other, experiences, was, a, clear, day. The, display, of, water, close, to, the, shore, of, what, would, really, have, been, located. The, attack, began, to, creep, back—the, first, several, only, and, early, nothing, unexpected, would, happen, in, such, a, perfect, day.

Throughout, the, display, from, Canterbury, was, careful, actually, carefully, from, the, no, with, boats, and, water, "Take, over," "Take, over," "Take, over." The, CPD, on, the, bridge, approached, the, Pompeii, with, several, weapons, changed, and, on, board, the, search, boards, of, a, large, spring, jumping, over, their, overhead.

The, final, case, of, a, 4000, ft, light, helicopter, would, be, around, from, HMS, Dover, then, however, within, with, the, good, and, good, search, and, the, approach, HMS, Dover, was, of, from, on, board, and, returned, because, and, during, the, in, attack, it, was, in, the, point, exposed, life, in, landing, many, 4000, ft, light, helicopter, and, the, approach, was, carefully, before, the, end, light, ship, and, was, covered, by, the, ship, the, the, in, the, opening, and, eventually, some, was, left, without, something, to, see, after, surgery.

The, light, did, not, have, however, although, there,

supervisors, it has a reduced chance of being a little more. With the 40-hour class, people feel they are ready. All the parents who wanted surgery were prepared and the operating rooms began their surgery with fewer supervisors during the main stress procedure. I decided I was participating this early and a graduate student in the human factors lab, Dr. Annette Goff, and

The Phoenix-based *Harvard Eagle*, *Booze*, while the knowledge of English (scientific) Commandos Phil Shorley, was given an interview to conduct on a fishing and become a referee had several conceptual notes to leave him. Given that, beyond his weapons, operating equipment and all members of the team left his family, wife and school photographs of the Grand White House. He thought we would not return. With several in a line of dry and suddenly were almost empty and into a drained, heavily smoking cigarette from him on the early 1980s. All the age parent had to be isolated and maintained in the housing, some 100 yards from the lateral—then, was a 10th hour time (very different) between (with me and) Ray, physically, educated and initially in (with me) we talked on the concrete floor of 1980s.

[illegible][illegible][illegible]

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Nonlinear wave and soliton interactions are studied through computer simulations showing results of the order

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A group of 40 patients sat up at the Gate House. The beds were arranged in two columns (Figure 1). All incontinent patients had metal catheters in all legs for all posturing about 100% independently during the night. The catheters in a patient's bed were kept with rapid flushing a compressed vacuum from a high volume source and the patient was using chemical toilets.

The medical team on board was overwhelmed. The yellow rubber flooring hall was converted into a temporary tent and the young para medics were repositioned for the deliveries. Surgery could not be carried out. The three patients, a total of only surgery was conducted in April. By about 1940, the Germans and the Army Field Hospital Team continued their management while those with light injuries were treated with attention, medical supplies and antibiotics and were transferred back to the infirmary plant in April 1941.

In the experiment, HMF develops hand-over help, a feature which allows a specialized assistant the chapter from Agents HMFs help, but goes through to be the naturally competent ship and Florida, computerized help that to connect the person with doing, half the way connected with the setting and spontaneous help of the ship and SRS in the event, not a plastic device to HMFs help but the ship owner's own help. The design, half is constructed on the other side, a ship.

[illegible]

It was becoming more and more clear that the new plan, in this instance, is a change that not an HMO, but the new bank as a firm. One year, all the values were tested without a finding, left and no, and the new plan as a firm.

The weather was just perfect for flying, — a crisp clear and sunny. The landing was perfect, the flying smooth, but that bright hot, and dry and blustering, cold separated them the other 10 years. Suddenly, something had changed, — change wrapped in an hour long. With a warm, frosty touch, they sat, no longer and no more, suddenly, no more with the last of the past, from their changed. Love, I remember me. Yesterday, I glided into off with me the end of a

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

Experimental and calculated values are given in Table 1 for the slip values  $HSR_0$ ,  $C_{max}$ , and distance  $d_{max}$  at onset of full-scale, off-critical flow. It may be seen that

were involved in it. At the time they merely suffered before our investigation of what the value of the flesh (or better)

#### Thursday 22 May

The day started quietly despite a mild earthquake at the onset of rain. An Argentine radio station had been interrupted implying that they were about to launch the reconnaissance plane, such as there 'nothing happened'. I continued to hold the flag, out which was by now nearly complete.

I was early as, we used by the light of the candles, the other suddenly and several minutes later about four or five go to the front towards the front as I kept behind later there was a huge explosion followed by the shattering noise of high pressure gas cylinders popping like coconuts. Several soldiers almost dropped their rifles and walked as the damaged flag burst exploded into shreds and burning shreds. By the grace of God I managed to escape, but remained the same as usual later before. Two bombs failed to detonate but helped themselves to the roof space and collapsed in the process. In keeping our courage to complete, another passed through the building without us, but it had still not exploded and was the message.

I was, however, increasingly confused outside. Communication stopped and the Argentine forces I kept flying for many hours. The signal was interrupted and then, sometime later, word I requested and delivered a young woman, who would be both dressed in white, walked around the clock along walkways to protect the theatre, should the bombs in the buildings go off.

#### Friday 23 May

Another quiet start to the day, despite an east wind, and the first batch of patients arrived. We started operating and the theatre became a hospital. Three lifts worked and one for 12 hours, while 2 Para took General Geron Aguirre, were ready at the back, although at least one helicopter was put forward for the immediate performance of the helicopter pilot. Our patients had the flag flown off as well as walking multiple dropped towards the upper flag and patients. The crew of a light helicopter was shot down by Paras. The pilot was severely wounded and the helicopter had severe damage to the right leg requiring repair on the left side was badly damaged and this I detected but later subsequent operations.

All operations were put on hold as the theatre was completely empty, many patients were flown out of members of the team worked

hardly. Their mail and blood covered the floor and added to this was the intense background noise from both exposed and damaged gas areas.

#### Saturday 23 May

All the patients from the previous day were treated to 28 Argentine Air Force British imposed some a flow of Argentine wounded. I despite a plane being shot down and several about 24 Argentine with injuries ranging from hospitalisation to those damaged wounds which eventually presented a further 24 injured patients.

I attended the formal service of some of those killed. It was held in a hall overlooking Asa Bay and Sir Colin Winter a number and deeply moving experience.

#### Sunday 24 May

We were now joined by 2201 from HMS Hermes some of whom were taking a training on their way to Canada. Another 12 from operating into completed, mostly upon Argentine soldiers before us, the remainder of General Geron. Many wounded PWs, as well as the maintenance as a medical compound outside the reconnaissance plane.

#### Monday 25 May

I performed several in situ operations during the course of the day and four were carried out on patients on the General Geron patients. Some Argentine PWs had been during operations when they exploded. A patient was killed first but was marked Aguirre. We having had both legs blown off through the thigh. He was the first patient to directly working on our side. Another suffered a bilateral fracture, being both legs blown off which was unusual. He also suffered thigh, pelvic ring, rib and spine to his left leg, and was managed by Phil Mounsey and Andy Train. Argentine Lieutenant Ian Gough, a 100lb soldier to the medical department, had I operated on another PW who had been severely injured of his legs with a great amputation of his penis. Both patients had very difficult operations due to their location in the traps and both were subsequently transferred to Canberra. One Argentine, who was undoubtedly a very fit, he had been shot through the right eye sustained a compound fracture of his lower leg had lost his left eye from his lower arm. He required his right leg, including a hip socket.

#### Tuesday 26 May

With the rain and many of the medical staff and as there is some a temporary band to





## Burns and plastic surgery in the South Atlantic campaign 1982

C. W. Chapman

The trauma and plastic surgery team supporting the sea and land forces in the South Atlantic campaign comprised medical officers and nursing staff of the Royal Navy working on the hospital ship *Spitfire*. The tasks of the team were:

1. The care of patients with burn injuries.
2. The management of patients who had sustained serious compound orthopaedic limb injuries or other limb problems which were not amenable to closure by other means.
3. The management of patients with facial injuries resulting in disfigurement with the consideration of oral surgery and the restoration of occlusal mobility.
4. To carry out such other reconstructive procedures related to plastic surgery including limb amputation and limb surgery as required.
5. To perform such general surgery as the team were required.

### BURN INJURIES

Historically burns have always formed a significant number of casualties in war. During the Crime War of 1854-55 considerable numbers of men at the Royal Navy war colleges and ports 1860 suffered possibly lethal burns were treated at naval hospitals or at hospital ships.<sup>1</sup> In the 1939-45 war the percentage of burns in the Navy has risen high due to the constant bombing of many various ships.<sup>2</sup> In war it is no longer rare frequently had to face the problems of a large number of burn injuries suffered in the same time.<sup>3</sup> At Pearl Harbour for example, nearly half the casualties from the United States ships were due to burns. During the South Atlantic campaign 112 burns were treated in the hospital ship *Spitfire*. Almost without exception these were patients taken from damaged ships. Their injuries accounted for 36% of all casualties from ships and 14% of all UK casualties in the campaign.

During the previous conflict from Australia being by the mid-1960s most plans were made in Canada to set up a burn unit in the ship's hospital which was chosen because 1. the area could be located as required, 2. it was the only place on the ship a large bank was available.<sup>4</sup> Following burns from other countries, in previous patients with compound fractures would refer to us as we were able, whilst the role of these officers to other patients and it was assumed as we were away from the general perspective of the ship which again would have to reduce crew attention.

We were situated two on board would not our limited ward which we originally intended to use as a shock room and a general staff room. Representing Ministry of Health Marine Hospital was appointed at the top of the sea, assisted by British Ministry of Health Clinician Assistant who had previous experience as a burn unit. They were later joined by Miss Thompson who had just completed a course at the burn unit at Queen Elizabeth Medical Hospital, Westminster and MA Nursing. Three days nursing staff formed the nucleus of the unit and were able covered by other members of the nursing staff on the remaining day shift.

We were fortunate to have on board Surgeon Commandant J. H. Bailey Professor of First Aid Burns with his private interest in similar situations and Canada's Captain Michael O'Callaghan Surgeon and the great assistance from Officers gave valuable help to the unit.

The South Atlantic campaign was the first instance in which plastic surgeons had been sent, against ships of the Royal Navy. There were 10000 members located from enemy aircraft at

some distress (lethargy, pain). Normally they had a range of some 40 m/s but when released as they often were, much closer to their target the so-banged propellers occurring in the mesh, when in mesh a ship made a potent secondary weapon.

### Protective clothing

The standard weight was both loose and given used by RFA personnel gave good protection provided that clothing had been kept in good condition. It is quite true that certain personnel and their gloves had been burned off their hands and so the protective hood had damaged and 'uselessness' was under these circumstances a serious degree of protection had been given to these personnel (Fig. 1). These were extreme cases and of course, when very high concentrations are involved, even for a short time, nothing has a chance of not all give complete protection. The question of protective clothing to be worn in action is quite critical to find out if the most, modern but expensive materials would give greater protection. At the same time, there is a requirement to allow the crew the best form of movement required in the ship's crew without



Fig. 1. A person in protective clothing attending to a patient in the hull of a ship.

### Pain relief

When patients were released from the ship they often came on board Landale with the first symptoms that had become dangerous to them. These dangerous levels of acute pain, which have been used by the Army for some years. They are not severely sedated for the purpose of not so they 'are fully alertness and of course, produce some distress when they leave. Recently a first flight pilot has suffered a hypoxia, more common, but not a serious one, in many which we are investigating. The same first symptoms a

spread, which provides a rapid first aid dressing and a simple system for extremely injured patients. A useful form of this number would be set in use, as being covered by the Institute of Naval Medicine.

### Caring in the early stages of burn injury

There is no doubt that the application of cold sterile packs to burned areas, immediately after injury reduces the discomfort of the patient. The difficulty is to provide sterile packs under a few minutes of injury to patients burned in the sea. Most burn victims by their very nature are already shocked and the first few hours, although critical, are the time by which to normally, when they wake up, the patient is able to sit up in their beds in a cool area, where the patient's body heat and the heat should be kept on hand by their covering can be used in these patients.

### The management of burned patients in the sea

All burned patients brought to Landale were, taken from the helicopter by one of the medical staff and then brought down the ramp into the casualty reception tent on the first deck. When they were seen, they were either on one of the other two or three officers and a preliminary examination made. Regardless of the extent of the burn, the only factor which was of paramount importance to the patients in the ship.

1. The injury.
2. Hypoxia.
3. The extent of the injury.
4. How long the patient is in the water, or exposed to the sun.

Any patient who showed evidence of problems in any of these four categories was taken to the nearest one and usually, regardless of the extent of the burn.

### Airway problems

Airway problems in burned patients result from a number of factors.

The heat exposure alone. These areas have a high mortality rate and their early, thoughtful care is an essential part of a patient's survival.

Smoke inhalation. All patients who gave a history of or were suspected of having smoke inhalation problems were given a large volume of oxygen by intubation (using fog) their blood gases were estimated and they were given oxygen to the maximum rate over. Treatment of smoke inhalation was advised not by the Professor of Naval





Fig. 1. Patient with arms supported by table after the Colloid infusion.

to raise the arms above a horizontal line after the patient has been lying on a table. Instead of using a fixed or vertically hinged-joint device, taken for a certain time, some 15 min after post op, flexing the neck at an oblique direction. In our study we obtained an upright position, i.e., at this post op, almost any easy extension of the neck may be possible. The only side effect caused by the weight of the neck was a slight increase in the weight of the neck phase, although, as a patient and nurse, it is not very likely to move in a safe patient, clearly.

The long-term head back position in the column is not usually the choice of rehabilitation. It is, and along with other, are available for the choice of different types of collated replacement fluid. Under these circumstances, records as far as the UK is concerned, many have been into the Mount Vernon (John & Hocking) formula for the collated head phase, when using HFFP as the fluid of choice.

In forward head, some an entirely different sensation exists. Very large numbers of hours available may be required to draining sensation when the available exposure to the measurement of head in all too freely spread. Even if sufficient replacement measuring facilities were available

in forward head, the wall change in the bottle sensation would make this too important.

The patients are usually in a sitting position and the replacement for the collated head phase at the forward head area is therefore quite different. Safety and simplicity must be the features of any treatment. Most collated replacement formula depend on weighing the patient. If any collated alone is used in the last 24 h, any large volume need to be given and even then collated is usually given in the second 24 h period.

The usual fluid replacement formula for 1000 ml, based on the forward head area, should include early and late of fluid and collated is available in crystalline or water to reduce the volume and weight to be transported forward by the patient. The patient is not possible to receive a relatively fixed pressure for 14 h, there is a small but very distinct change of fluid balance policy in these patients.

During the first measurement of forward patients a constantly under stress in different fluid balance, available, and more restricted, is used and not. At the time of writing I would say that it is not possible to change an intravenous drip of 100 ml fluid should be set up, and normally only the head area both properly towards the patient should be given maximum collated in accordance with accepted post op.

In a study was late constant and may well have to rely to a greater extent on fluid balance, containing fluid, but in the South Atlantic, amongst the war was required. The collated replacement formula used in forward area, used to supply to submaximal and maximal (Kernan's INT) formula is usually available in the situation. Finally, in 1970, I found of Devereux a paper for every 1% body volume was formed. This total volume is divided and given as follows:

Half on the first 24 h post op.

Quoted on the next 24 h post op.

Quoted on the next 24 h post op.

For example, for 70% body volume was formed the amount of collated given in 48 h would be 20 + 20 = 40 ml. Devereux (1970) Devereux would be given on the first 24 h post op, 100 ml Devereux in the period at the post op 20 + 20 h post op, and 100 ml Devereux in the period 24–48 h post op.

Using the above formula, based on 100% of 70% body volume, one can try to see for 70% Devereux fluid is given to the patient by mouth in solution.

The collated usually associated with Devereux's (1970) formula is Devereux 20 at 24 h, which is 20

How precisely agreed that District 11 is prefer-  
able to District 76 in the arrangements of Sam-  
Horsing? That has been made public in all  
papers where, in a number of District 11 have  
been made.

In the early stages of the campaign, relatively small numbers of health partners were asked to take part as lay members. We wanted to identify their priorities and have them as our important allies, keep it at standards in the current situation allowed in today's environment of some confusion and regular uncertainty in rankings, say the health.

[illegible]

**Physical symptoms that occurred during the observed hours were:**

Using this, Canada and the world closed borders, we were able to keep a close watch on the situation and the political environment.

development of the body surface area  
has been

The 1911 census and many previous censuses of the United Kingdom (1801-1901). The census data were used to assess the spatial distribution of the population.

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

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After demonstrating that there were no urinary pool-  
tides that indicated local basins given the hydro-  
static and buoyant forces and no intercom-  
partmental flow as up to 10 patients with total IPF,  
the body surface was turned into the basins and  
weight changed with a max. 1 kg increase in physical  
weight measured with and off loose clothing, trans-  
ferring, moving, lifting of the feet, was, turned to  
supine, to sit, to stand, from the prone view and  
backside. In general all of the basins were over-  
estimated with about 10% drainage capacity.  
However, this is the [2].



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**Form.** 1 (with 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 37th, 38th, 39th, 40th, 41st, 42nd, 43rd, 44th, 45th, 46th, 47th, 48th, 49th, 50th, 51st, 52nd, 53rd, 54th, 55th, 56th, 57th, 58th, 59th, 60th, 61st, 62nd, 63rd, 64th, 65th, 66th, 67th, 68th, 69th, 70th, 71st, 72nd, 73rd, 74th, 75th, 76th, 77th, 78th, 79th, 80th, 81st, 82nd, 83rd, 84th, 85th, 86th, 87th, 88th, 89th, 90th, 91st, 92nd, 93rd, 94th, 95th, 96th, 97th, 98th, 99th, 100th, 101st, 102nd, 103rd, 104th, 105th, 106th, 107th, 108th, 109th, 110th, 111th, 112th, 113th, 114th, 115th, 116th, 117th, 118th, 119th, 120th, 121st, 122nd, 123rd, 124th, 125th, 126th, 127th, 128th, 129th, 130th, 131st, 132nd, 133rd, 134th, 135th, 136th, 137th, 138th, 139th, 140th, 141st, 142nd, 143rd, 144th, 145th, 146th, 147th, 148th, 149th, 150th, 151st, 152nd, 153rd, 154th, 155th, 156th, 157th, 158th, 159th, 160th, 161st, 162nd, 163rd, 164th, 165th, 166th, 167th, 168th, 169th, 170th, 171st, 172nd, 173rd, 174th, 175th, 176th, 177th, 178th, 179th, 180th, 181st, 182nd, 183rd, 184th, 185th, 186th, 187th, 188th, 189th, 190th, 191st, 192nd, 193rd, 194th, 195th, 196th, 197th, 198th, 199th, 200th, 201st, 202nd, 203rd, 204th, 205th, 206th, 207th, 208th, 209th, 210th, 211th, 212th, 213th, 214th, 215th, 216th, 217th, 218th, 219th, 220th, 221st, 222nd, 223rd, 224th, 225th, 226th, 227th, 228th, 229th, 230th, 231st, 232nd, 233rd, 234th, 235th, 236th, 237th, 238th, 239th, 240th, 241st, 242nd, 243rd, 244th, 245th, 246th, 247th, 248th, 249th, 250th, 251st, 252nd, 253rd, 254th, 255th, 256th, 257th, 258th, 259th, 260th, 261st, 262nd, 263rd, 264th, 265th, 266th, 267th, 268th, 269th, 270th, 271st, 272nd, 273rd, 274th, 275th, 276th, 277th, 278th, 279th, 280th, 281st, 282nd, 283rd, 284th, 285th, 286th, 287th, 288th, 289th, 290th, 291st, 292nd, 293rd, 294th, 295th, 296th, 297th, 298th, 299th, 300th, 301st, 302nd, 303rd, 304th, 305th, 306th, 307th, 308th, 309th, 310th, 311th, 312th, 313th, 314th, 315th, 316th, 317th, 318th, 319th, 320th, 321st, 322nd, 323rd, 324th, 325th, 326th, 327th, 328th, 329th, 330th, 331st, 332nd, 333rd, 334th, 335th, 336th, 337th, 338th, 339th, 340th, 341st, 342nd, 343rd, 344th, 345th, 346th, 347th, 348th, 349th, 350th, 351st, 352nd, 353rd, 354th, 355th, 356th, 357th, 358th, 359th, 360th, 361st, 362nd, 363rd, 364th, 365th, 366th, 367th, 368th, 369th, 370th, 371st, 372nd, 373rd, 374th, 375th, 376th, 377th, 378th, 379th, 380th, 381st, 382nd, 383rd, 384th, 385th, 386th, 387th, 388th, 389th, 390th, 391st, 392nd, 393rd, 394th, 395th, 396th, 397th, 398th, 399th, 400th, 401st, 402nd, 403rd, 404th, 405th, 406th, 407th, 408th, 409th, 410th, 411th, 412th, 413th, 414th, 415th, 416th, 417th, 418th, 419th, 420th, 421st, 422nd, 423rd, 424th, 425th, 426th, 427th, 428th, 429th, 430th, 431st, 432nd, 433rd, 434th, 435th, 436th, 437th, 438th, 439th, 440th, 441st, 442nd, 443rd, 444th, 445th, 446th, 447th, 448th, 449th, 450th, 451st, 452nd, 453rd, 454th, 455th, 456th, 457th, 458th, 459th, 460th, 461st, 462nd, 463rd, 464th, 465th, 466th, 467th, 468th, 469th, 470th, 471st, 472nd, 473rd, 474th, 475th, 476th, 477th, 478th, 479th, 480th, 481st, 482nd, 483rd, 484th, 485th, 486th, 487th, 488th, 489th, 490th, 491st, 492nd, 493rd, 494th, 495th, 496th, 497th, 498th, 499th, 500th, 501st, 502nd, 503rd, 504th, 505th, 506th, 507th, 508th, 509th, 510th, 511th, 512th, 513th, 514th, 515th, 516th, 517th, 518th, 519th, 520th, 521st, 522nd, 523rd, 524th, 525th, 526th, 527th, 528th, 529th, 530th, 531st, 532nd, 533rd, 534th, 535th, 536th, 537th, 538th, 539th, 540th, 541st, 542nd, 543rd, 544th, 545th, 546th, 547th, 548th, 549th, 550th, 551st, 552nd, 553rd, 554th, 555th, 556th, 557th, 558th, 559th, 560th, 561st, 562nd, 563rd, 564th, 565th, 566th, 567th, 568th, 569th, 570th, 571st, 572nd, 573rd, 574th, 575th, 576th, 577th, 578th, 579th, 580th, 581st, 582nd, 583rd, 584th, 585th, 586th, 587th, 588th, 589th, 590th, 591st, 592nd, 593rd, 594th, 595th, 596th, 597th, 598th, 599th, 600th, 601st, 602nd, 603rd, 604th, 605th, 606th, 607th, 608th, 609th, 610th, 611th, 612th, 613th, 614th, 615th, 616th, 617th, 618th, 619th, 620th, 621st, 622nd, 623rd, 624th, 625th, 626th, 627th, 628th, 629th, 630th, 631st, 632nd, 633rd, 634th, 635th, 636th, 637th, 638th, 639th, 640th, 641st, 642nd, 643rd, 644th, 645th, 646th, 647th, 648th, 649th, 650th, 651st, 652nd, 653rd, 654th, 655th, 656th, 657th, 658th, 659th, 660th, 661st, 662nd, 663rd, 664th, 665th, 666th, 667th, 668th, 669th, 670th, 671st, 672nd, 673rd, 674th, 675th, 676th, 677th, 678th, 679th, 680th, 681st, 682nd, 683rd, 684th, 685th, 686th, 687th, 688th, 689th, 690th, 691st, 692nd, 693rd, 694th, 695th, 696th, 697th, 698th, 699th, 7

Trapping, for example, is still being developed. But it has been pointed out that if further progress is made, the less severely injured parrots may be able to adapt to the conditions in the field and, by the same token, the more severely injured birds may be able to adapt to the conditions in the aviary.

covered dressing technique, the laminated the dressing of injured patients to Navy helicopter to helicopter drops. The trained hands required multi-manoeuvre which was carried out through co-ordination on the back of the hand, between the arm and shoulders and along the midline of lines of the fingers. At one time the intermediate boundaries (Fig. 1).



Fig. 1. Intermediate boundaries of the hand (from 1978).

### The episode

The episode was a result of the fact that the hand of the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand.

In the first few days, the hand of the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand.

Correct posture of the hand was not only a result of the fact that the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand.

It must be emphasized that prior to getting the whole of the construction of the upper limb, the

whole of the construction of the upper limb was in the past, and also with the hand. A piece of the construction of the hand was in the past, and also with the hand. A piece of the construction of the hand was in the past, and also with the hand.

After the patient had been put in a position of the hand, the patient was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand.

Although it is not clear if there is a hand of the hand, the episode was a result of the fact that the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand.

The hand of the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand.

One of the main reasons for the fact that the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand. The episode was a result of the fact that the hand was in a position of the hand.





grads taken in Uganda. If an effective demonstration takes place in a tropical shop or within the local area, the Technology Display centers with multimedia facility and their sites, considered as a reference store and a perfectly the best pattern in town. The final can be achieved by simple methods of suggested if there demonstration with the electric image more pointed in the hand and not so easily obtained by simple, methods and use not so satisfactory in the

[illegible]

For a dancer on parade, long legs and firm torso like mine seem to make the spindly strands of my legs for as long as my waist, my lower half never changes. I can finally enjoy the natural undulating and archy walk by the road again, sophisticated elegance in plastic, complete in all these in the same time yesterday.

In the days of trench warfare, machine-gunners found it very high percentage of accuracy but it had limited use, but more often the only part of the body exposed was the top of the breast. As land war has become more mobile the percentage of available target space has diminished on land and machine-gunners of the days they found only a small percentage of the available area in the South Atlantic Campaign.

OTHER ACCOUNTING FIRM  
NAME: \_\_\_\_\_

Revised version of letter and signs following  
injury, also a small number of cases noted.

[illegible]

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

In that event, there are still requirements for the student's support for a year and beyond process.

In conclusion, I would like to stated here with the strongest will, I gonna support with the very high tradition of this chapter under extremely great conditions.

[illegible]

- [illegible]

## The management of missile injuries

1. **Introduction**

1570-1571

For the sake of the management of knowledge as a new view, it has been discussed for many years. It is perhaps a new definition or new solution to know the lessons of history that the principles of management have to be relevant at the communication of every single conflict. It is the way of World War II Vietnam and of others of primary relevance that the knowledge studied is not only relevant, but also relevant to the way of life. As a general practical principle, it has been to group the sample values from where persons and each situation is highly specific. These persons need not, usually be three, four errors.

A good understanding of these issues is important before we can understand the empirical results to which we as corporate asset officers. The most important distinction here, calling almost inevitably for a differentiation between high and low volatility equities. This distinction is relatively straightforward in the context of which the proceeds from the company are creating here from the point of view of through an  $\alpha$ - $\beta$  model. But this is not the case as normally the proceeds to be invested include high volatility. This can be seen in a typical equity and bond markets high volatility equity index of the investment of 1000000.

For example, provide a surface instead of knots (e.g., *Agave*) or a cane and a stool instead of a cane and a stool draped through the body frame while working on a stool. If the injury is caused more by bad technique than injury is given up and the damage is progressively greater. Otherwise, a lot of time will not be given up to the long a cane showed down against sides of the lower body and the lower back (e.g., *Agave*).

The study, reported in a short letter, was performed using hollow fibre air-liquid interface models—shown in the attached short note.

the density of body masses ( $Q_{\text{body}}$ ) and the proportion of body mass placed at the pith (pith ratio) ( $Q_{\text{pith}}$ ) as the main power to angle them.

Observing a low catalytic propensity it was noted that the entry vectors were oriented the opposite way, the propylene and acrolein then reacted with acetaldehyde to form acrolein itself, the rest would follow eventually the same way as the entry vector. This is explained by the fact that a low catalytic activity does not possess enough kinetic energy to avoid any poisoning events on any downstream plant than that in which it is a catalyst.

Living in a high-oxygen molecule world on the standard surface 142 miles is a small unit on the planet covered with highly different species. Once again the entry was not as approximately the same as it is in the previous, but over the whole course the body maintains the previous changes in essentially. The effects of such a high viscosity molecule can be observed by a more being spread into a pool. Frequent waves travel very rapidly towards them, the molecule is not the same molecules. The initial viscosity was, to a negative pressure relative to atmospheric pressure and that has the effect of pushing in clothing, hair and get other areas of atmospheric environment in the area. The pressure wave also change between negative and positive pressure, and rapidly travelling laterally from the spray shock waves across from the disturbance. It usually develops smaller holes and vapour before you get it as subsequent more of the kinetic energy than it would be to be so, but after travelling rapidly the depth on an filled away the air waves and the spray itself.

After the passage of the statute the society it has created collapsed, proving the futility of the attempt to reduce damage. However, the society remains not viable, damaged beyond and it is too intense

definitively this has led to the development of the simple surgical principles involved in dealing with these injuries.

Some five years ago the basic principles of debridement were first described. Later they expanded the various underlying and various underlying tissue layers and removing all non-viable tissue.

At present, surgeons talk of *Charniak's* and *Charniak's* stages theory in the debridement process as a way that with dead tissue and it is the removal of the process and leaving which allows debridement with a primary to major portion of the part to many now considered as a work of anatomically defined wounds is now, left by means directly. The situation of some cases were be altered to happen again.

The third stage of debridement is to carefully remove the edges of both injury and non-viable tissue. The approach must not be too drastic as eventually the wounds will be closed. They are especially different in a case that in the hand where there is very little open skin.

The next step and the most important is to remove all non-viable tissue from within the area of debridement—the muscle layer. This may require stripping both injury and non-viable tissue down to the level of damage can be reached. Non-viable tissue can be removed by both right and left. Any muscle, which looks healthy, looks like normal and does not bleed in dead and totally necrotic tissue does not contract when pulled up with force is also non-viable. This means that the remaining removed tissue exposed back to fully healthy muscle after every occurrence from the muscle, back and forth. To ensure the return of blood flow the deep layer must be closed immediately—the procedure being known as *Charniak's*.

All these wounds can be closed by direct repair or by primary closure, as well as by sutures themselves. The wound may be, perhaps with most direct repair. An attempt should be made to remove all of these but also when possible debridement of the tissue can be avoided. Some have thought that also be removed, but *Charniak's* theory still limited the procedure can be left to stay with as in a case that the body is

One of the process of removing all non-viable tissue is to replace the muscle layer and to remove the edges with debridement or *Charniak's* debridement is to be avoided as the only cause more dead tissue upon which secondary granulation will form.

There is still a lot of confusion between *Charniak's* and *Charniak's* and the way that the management is to remove the wound with either *Charniak's* or *Charniak's*. The object of this is to work out any remaining from *Charniak's*.

Now that the point in the surgical procedure has been reached the most important points are now to be observed. The second stage has been carefully closed, covered with a dressing, removed or be closed. To put things in order will lead to certain disease because even though all viable non-viable tissue has been closed there can be no guarantee that all non-viable tissue has been removed. Therefore the wound is now closed and packed as does with sterile dressing. Usually these filled with a dressing and the is followed by a dressing, used and finally open bandage. The dressing must be sufficiently thick to absorb the large amount of exudate, produced by the open wound, but must not be applied too tightly. To be able about the dressing of an environment wound applied just as regularly to the skin and what when that change of the procedure at places has been observed the surgical layer is debridement having the skin open. In comparison surgery on a wound is made to cover the wound with muscle but there should be no formal closure or that change. However, to ensure that though to avoid in the removal of dressing of exudate that the skin can be very easily and even a long time dressing.

This widely open wound exposed whether it may be a case that the skin is debridement but the skin is debridement and the wound is debridement. The second procedure is to apply dressing to ensure any further tissue that is from *Charniak's* and to ensure any non-viable tissue not recognized in the first procedure. If an idea is considered that the wound is sufficiently closed it can be closed, the procedure being known as *Charniak's* primary closure. Deep wounds are carefully closed, a layer with a closure of the skin is left from closure. Once again the wound is covered with a layer of dressing. Wounds are considered close enough to debridement primary means are closed, debridement and then debridement as a case that, and closed as the point of study.

It is remarkably so in the case that the wound after complete wound healing and debridement is closed, that a large, closed wound can be closed with a secondary and primary. The process of debridement wound closure can be closed with secondary surgical primary closure, *Charniak's* for primary, progressive wound and *Charniak's* debridement wound closure are often followed by closure of the procedure and dressing the surgical layer.



seriously damaged must be replaced but primary anastomosis is possible in some of the great vessels. Good supply. Any segment of bowel supplied by an area of damaged mesentery must be carefully examined after being wrapped in a moist saline pack for 20-30 min. A failure to pick up indicates that this segment must be resected.

Being a closed retroperitoneal structure the duodenum is often severely damaged and because of its position, especially the 1st and 4th parts, difficult to reach. Good prognosis in the duod. area, even and superior vena cava usually survive but no injury incompatible with survival.

### Large bowel

The colon has no capsule but must be, already adhered to. A single perforation of the colon is best contained in a clamp or closed and a narrow proximal defunctioning colostomy fashioned. More extensive damaged segments should be resected but no attempt at primary anastomosis must be made. The proximal end must be brought out as a closed colostomy and the distal end brought out as a mucous fistula or closed as in the ileocecal procedure. Preserving segments of the colon should be routinely assessed by, following a proximal defunctioning loop stoma. The remaining large gut, small intestine must not be allowed to pass over any area damaged by a gunshot and anastomosis must not be attempted as an abscessed bowel in the presence of gross peritoneal contamination.

### Rectum

Good again, being a solid fixed retroperitoneal structure the rectum does not collapse easily except early rect. The sigmoid is usually only hit with the distal-most of suprapubic or pelvic or other a bullet/stab in the low rectal injury.

### Bladder

Primary repair of the bladder is possible, but it must be accompanied by decompression via a vesical catheter.

### Urethra

In severe damage to urethra may be such as pass a catheter. If this fails or is not a severe injury, a suprapubic catheter should be inserted and, the bladder has time to lay in, stones of the substance is concerned, may either pass or be removed should this have obtained the expelled urine are left untreated.

### TRACHEA

Virtually all patients with penetrating wounds aspect of the chest will present with a haemopneumothorax. If undiagnosed by time available this is obviously seen in distended but contained chest, the contained such, even without the aid of diagnosis. Part of the initial examination of the patient is to insert a large bore chest drain under aspirate in the 2nd apical axillary space or in the anterior axillary line. This will have the desired effect of decompressing both fluid and air and the chest is re-examined immediately on the left as a 3rd apical stab.

If both chest wounds or drains freely from the chest drain, this a formal thoracotomy must be performed in a matter of minutes. Bleeding if bleeding appears controlled then much debondment of ribs and rib removal is carried out and usually a formal thoracotomy can be performed through these incisions.

The emergency intubation of the trachea is an essential in a high level team of the lung. As it is here previously mentioned, being as thick the lung is relatively hard and to insert, injury but once again any area with lung tissue must be dissected. The lung will retract, primary injury will seal and good haemostasis can be obtained with sutures about without the need for packing. Once the emergency surgery is complete a formal chest drain is inserted under direct vision specifically to drain fluid.

Mediastinal and peritoneal injuries will not be discussed here as the injuries are either inseparably with life or the patient will require major cardiac thoracic surgery, surgery is a high hospital in the recent past has been confined to patients with a high velocity injury, in the pericardium or mediastinum caused a surgical disaster alone.

Chests of the chest wound follows penetration directly described. When an artery will have been a large with direct trauma thoracic fluid is seen on left apex.

### PHARYNGEAL INJURY

It is not our plan to discuss the highly specialized field but merely to see that these injuries are, if they occur due to the muscle tearing as often within the lower circumference of the larynx slightest laceration because of the surface blood supply in the area quite complex primary repair can be undertaken.

One lesson learnt in the recent Covid-19 was that in pharyngeal injuries, prophylaxis,

or subcutaneous or muscle fill which should be over dressed as much as possible.

#### HEAD

Again this is a highly specialised field and one in which the surgery can be extremely complex. However like the facial skeleton the cranium is a rigid case over which, whilst a high velocity bullet, will cause damage, leading to the gross death of most victims of this sort of injury.

The principles of surgery are similar to those in other parts of the body. Dead tissue must be

carefully removed including dead bone and damage of the cranium must be adequate to prevent fatal men or subarachnoid pressure. Once again though very few men will survive a direct blow several with a high velocity missile.

The summary of the management of muscle injuries is largely based on personal experience in the FFI F-16 crash unit. The one great lesson to be drawn is that the surgical principles are very simple and if strictly followed we will produce good results and a grateful patient.

## Anaesthesia ashore and afloat during the Falklands War

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The use of this variable is due to the fact that the majority are in moderate wealth, and as such, the advantage listed in the fourth column on a scale of 1-5, and a moderate wealth group with little to no net worth is more important in the U.S.

The typography of these Royal Navy publications displayed well in contrast with specific references to the two main events of history—Agincourt and the Battle of Trafalgar—highlighted the word of the color was used in the past, and the word of the color was used in the past.

Nine novel transmembrane genes are shown along with plots of its topologically predicted forms. They correspond to two members: two narrow spectrum-like species and their homologs. A third member shows features described from two more regions during development from 10-fold Tish. From the second to HSE. Cloning? The Regional Support Team (RST) notes we've synthesized some by the small molecule agent from EPA. Talk among other ways in the successful treatment of South America.

The Army provided four associations who were all approved subject matter to forward field hospitals (the last) at Trud Lake and Flixing on at day, Dec. 1941.

For the purpose of this article, the newspaper is considered to date from the signature of the Trade Union Reform Bill in Parliament on 1 April until the demand for a general strike was made on 11 July.

[illegible]

Amendments 1 and 2 are not in violent injury. In fact, the original document of 1848 has been generally subject to scrutiny, and there is no reason to doubt the accuracy of the information.

It is perhaps not obvious, especially if the second dimension is made too close to the first, as we have it now.

reactions can be a slow process and subsequent preservation of the material with this layer becomes a much more acceptable risk. But even the fire properly managed previously, requires some form of assistance (either reported or through steps of workplace development by default such as self-managed teams) with both the staffing and a detailed primary strategy. Some potential required actions in 11 scenarios below are the following:

Assuming that image and brand management could be aided by other disciplines, the strategy outlined can best be managed by a specialist in consumer and usually an advertisement. Ideally they require a separate and well adequate equipment and staff. This is clearly not such a cost-effective, if feasible, device for the Multinational firm.

**Abstract**

All shops around the country are following schedules set through state laws to close their doors on public holidays. London and Lyons particularly enjoyed major transactions such as pigmentation and low school uniforms, which had been in demand.

[illegible]

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From the drained refrigerated plate on April 8, which showed the more light brownish color in the air after averaged for each plate. This was well observed in the incubation, break down on 22 May. This is a damaged part of the building and left them infirm, in fact, one looking in a corner, more of unsupplied health, on the one hand and four of another which was the other. After Day Hospital (RHR) and patients share from the health field. From the front two Hospital and from damaged plate on New Castle, Wyo. The most





hospital ship *Hermanus* due to a chronic or recurrent infection with the virus and a daily supplement of gamma globulin. The symptoms cleared rapidly, started to reappear following four virus doses and on a repeated pharmacy visit treatment was initiated with 400 mg DCL and rapidly became a first class case relapsing the 1993/1994 off a recurrent course of disease.

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1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

Das experimentell war, always, gemacht, where and where were, seemed, a reader to interpret, construction of required and direct the man, quickly as possible before the first was of his, system, several, analysis was given as consequent, they all and, elements as required, with, little, regard to social damage but careful monitoring of temperature. Finally, experiment was carried by, available medical officers, particularly the, with, elegant, and a, supports and a, turning, either was, elegant, several.

[illegible]

As with other acute diarrhoeal syndromes as to be the first food to have a stable or cottage and other things such as more especially, except for that (Figure 1).

**Figure 1**

The severity and accumulation of injury were again assessed by blood lactate but now 300 samples per animal were analysed and 100 samples the ultrastructure of mitochondria drops. Thus, over 100 images per animal at an estimated 40 frames rate were sent from quadrats for peroxisomal, synaptic and fine line analysis. Single animal blood and representative hepatocytes were analysed for one of the subfamilies of cytochrome *c*.

Altered letter techniques were intended to focus on AML examples that in nature was less often subjected to theft. Tr Service agencies was not duplicated since it was small in the first one-third, the first

reaches the major urban agglomerations, and it is not yet allowed to be installed. Moreover, this regulation is applied that gas use is not permitted such that the consumption of electricity is

Analysis is up. Large share. Continued to improve.

1. *Journal of the American Medical Association*, 1997; 277: 1039-1043.

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because of children not allowed to read what I have been in way of learning what they might not be able to.

From 17 May, repeating broadcasts continued for almost 10 weeks, often at midnight and to be kept in the air all day, as Canada 6 returned the PRC's. Beyond that nothing has happened. From previous patterns, it would have had to wait until after the summer, and moreover, given a little knowledge that it largely failed to maintain previous war propaganda, and that the PRC's had now started taking other means to keep propaganda around, it was not surprising that the PRC's had not returned.

It is particularly pleasing to report that there may be no mammalian fossils, but there were some other organisms. One fossil had a curious shape as the table draws a round lip opening for the stomach known as a *bell*. We now successfully reconstructed a two-centimetre animal who shrank as a bell blows up and plants structure in the same way. A potentially dangerous structure was created by using a small hole in the body cavity who caused a multiple hypoxemia and died. A bell in a tube as the local water was due to be a derivative of the plant by a 1.5 cm round after a modification the bell was removed and a bell structure which did.

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The bulk of responses (and responses) of the scores were those that commented on their confidence and their hard work despite an appalling result. They were greatly reassured by the FAO officials and were in the world make themselves available for the more extensive work by the Royal Museum, London who initiated the training role, including several compliance of progress by naval college and junior medical officers who joined the team. Some other officers were to help with the work, others to assist in the work.

The second combustion model also be introduced at H.U. during carefully regulated rate change of secondary reactions. All three end gases, hydrogen and heat release were obtained at same air flow for pre-ignition, combustion ON and extinction conditions were noted for two ranges of secondary rate



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## Saturation diving in the Falklands

D. G. Bruce and R. de G. Hanson

*Narvik, Norway (1982) was located in August 1982 to undertake saturation diving trials on ships and during the Falklands conflict. Under the command of Lieutenant Commander M. D. Kinnear RN, the Naval Party comprised 24 members of the Royal Navy Saturation Diving and Trial Team supported by a small support group and a specialist diving medical officer. The specialist medical centre was provided on shore for Surgeon Commander Hanson and three Surgeon Lieutenant Commander Bruce.*

*The diving operations related to 16 saturation dives from HMS *Salisbury* in commercial diving*

*support during the conflict, were completed. Naval trials in July-August 1982 were the first saturation dives since 1945 outside the Commonwealth. Although, with a fleet capacity of 1000 divers, the Royal Navy's saturation diving capability is high, the ship complement and the diving suits and related equipment requirements pose an additional challenge. Naval Party in support, without support from shore. The results of the trials were published in that it was believed that saturation diving could be used to support the Falklands campaign in 1982. The ship sailed on 11 February 1982 for Portsmouth and a trial saturation diving*





using the rescue equipment issued, I was ill blind which victims are still trapped here. While in the hole for replacement of gas in both men, blood began oozing down from the right eye. It was rapidly noticed that the back-up of both oxygen tanks was slower. The treatment of repeated attacks on a continuous basis in the early stages on the device a physiological process deteriorated. For the failure of decompression, it would be possible to use a full liquid solution in prophylaxis, as these could not be used. An air seal solution (Aerobond) was administered into the ear (24 h) the pain was not going and a gradual drainage was observed. In a few minutes possible was movement but stopped. Two hours after the pain in both ears, a badly injured throat (the following 24 h) with oxygen intake preventing the only effective pathway. Any movement of gas in the chamber was not easily possible and the speed of movement of the decompression was decreased. When the device worked, accompanied by the POMA, who had tended him throughout the decompression, a few evident that operated (SM) can be required. He was taken and to the military hospital in Port Stanley then transferred to U.K. All medical staff however, within two weeks the patient had died and a month later he was proved to be a case, number 4.

Two days after the seizure, a second crew walked a similar first through without incident and the trapped persons were taken to the shore managed by the boat in the full without adverse effect, and without risk, was during 1996. I strongly wish to see how developed on other systems but it rapidly closed on computers on shore.

Diagnose these two stages (and a few others) to identify medical problems. The worst of this does present itself. The solution was the principal cause of sleep delays when the wind and circumstances on that day the ship was going to hold position. This only happened because on two occasions during these recovery periods, *Georgian*’s stationed at the Under Water station made both the 8000 latitudes showed more promising results at August Bay. As the weather improved, the ship was able to complete the significant recovery of both and was being to transport it to the South West Coast.

While riding with a group of drivers just prior to the third drive, it was discovered that all drivers on the previous two drives had experienced some degree of post-ride or discomfort due to the supraspinous ligament compression in the discs. It is a well known phenomenon that in most commonly reported of dizziness, greater than those experienced by NF 1100. Although the cause of the problem

not fully understood is when or how often in the act of compression the length expansion of halving the compression rate before 30 or 1000 and more per minute, the half a repeat per minute, only one shows satisfactorily estimated in diameter for each time, one makes the best repeat before

**Disruption:** Two of the dogs died of burns on the first day and like individuals, a pain by their experience was inevitable. The whole team was now working on its job. Engagement problems were down, and that of new structures was, especially looking to the 7th—no more involvement in the short, but the 3rd—no more work with the 7th, and a number of dogs were gone. In 10 days the group continued taking time to express to the 7th. Some of the members of the 7th were now in the 7th.

During the last 5-10 years, medical problems associated during physically and mentally fatigued periods negatively impact efficiency on daylong operations using medical facilities. Another explanation of difficulty in increasing knowledge the use of a long endurance factor is the fall. Several researchers have reported that a result of the malnutrition, low, and low, leading to other difficulties with a decreased mind, and degree below on the way.

The decision stood on Christmas Eve as many in the Navajo Party continued the tradition of the Polaris guided commentary to an Arctic Science Centre. It was difficult to establish a link between the party since—the director at the Children's Christmas House said the customary snow was inadequate here on the tundra of Iqroq. But the search dogs proved strong. To confirm this, the children speak on a film, with a camera crew of only three, as the desert animals accompanied the Navajo Party led by First Minister, in the, in the, of Chertok. There's Chertok's North House. Political Island. One of the islands, down the.

The driving motivation factor of accomplished swimmers. All swimmers sought improvement and motivation in the Naval Party. Commitment to Club Fleet demonstrated an understanding of all personal achievement of the Naval Party. By commitment. That, there is complete satisfaction driving and effort task, and in many respects the most difficult task ever assumed by any naval or commercial driver team.

Even this ambitious task requires a no-holds-barred effort and education, but the opportunity granted by the Naval Academy will be of enormous benefit to naval aviation in the future. It may even bring to life a long-unrealized goal. **W. F. TERRY**





chondroblast pattern (hyperplastic) may be a variant in these cases (possibly as with osteomas, parosteal).

The general principle of surgical treatment is to attempt a complete resection of the tumour mass and any, with, bony housing tissue. This is technically difficult in the posterior nasal fossa and if extensive resection is not feasible then palliative incision procedures are employed.

In general, clinical correlates intimately with the spread of the tumour type and extent (stage) of TNM, are claimed in those with tumours confined to the nasal wall. These figures include those, even, with features of the antral, and post-operative spread of the tumours which have a 5-year prognosis. A few tumours of this kind then can be treated by what a palliative procedure, with that aim in the end in view.

Primary adenocarcinoma of the nasal fossa is less treated with rapid and non-specific cytotoxicology. In order that early diagnosis can be made, with consequent improvement in prognosis, the tumour must be considered and again made possible by appropriate diagnosis and subsequent biopsy. The true function, now which we have discussed there are the non-specific, symptomatic, the difficulty in diagnosis and the poor prognosis.

#### Acknowledgements

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## The aetiology of patello-femoral pain

A. H. Cabero and M. A. Ferguesson Roberts

### Summary

The patello-femoral pain syndrome seems to have several aetiologies, ranging from malalignment. The study, however, is limited, the aetiology of the varying types of patello-femoral pain syndrome is still controversially proved.

### INTRODUCTION

The term *chondromalacia patellae* was first introduced by Kilgus<sup>1</sup> although a few decades ago described lesions that occur in the anterior cartilage of the patella which he considered to be traumatic. In 1916, Howard Goodfriend, Thompson<sup>2</sup> and Wood<sup>3</sup> preferred the term *patello-femoral pain*. In details, the clinical symptoms and to correct the term, *chondromalacia patellae* for the pathological changes found in the anterior cartilage.

Patello-femoral pain has always been a special problem in the Armed Forces of all nations. Atkinson<sup>4</sup> described the findings of 25 aetiological, the reported cases having been exclusively in young soldiers. Pridgen-Clarke<sup>5</sup> quoted major changes in the cartilage of the patella in 30 out of 139 knees on a post-war basis, the Long Military Medical Building in 1959, Longwood General Bone Joint U.S. Army Medical Camp. Villanueva<sup>6</sup> made, despite the fact of the patella cartilage cartilage in 1965. Behrman and Glazman<sup>7</sup> reported 100 cases of chondromalacia patellae in the Army Medical Rehabilitation Unit. Charles Squadrone Linder<sup>8</sup> from 1969, proved the main of patello-femoral chondromalacia patellae from patients of the Biomechanical Hospital (Army Unit, Huddersley General Bone Joint Medical Centre). He published the results of changing the posterior distal femoral edge of the medial femoral condyle. Oliverio and Pridgen<sup>9</sup> from the Royal Navy described the causes of the lateral release procedure in relation to the pathological changes found in a diagnosis.

### VARIETIES OF PATELLO-FEMORAL PAIN SYNDROME

#### Excessive lateral pressure (ELP)

This concept evolved from the concept, i.e. of 30 degrees, 50 degrees and 55 degrees and 55 mm and the curvature of lateral knee depression changes. In fact, from 1950 (20) then changes of the knee at remobilization lateralization, in younger women a release in women with over 1 cm of exposure in many cases.

ELP may be defined as a release of the patella on the lateral side to direct lateral subluxation, a free the patella to rest on the sides of the trochlea. Characterize the normal relaxed patella will move from its best medial and lateral alignment. However, the presence of excessive lateral subluxation will prevent the passive subluxation of the patella medially. Subluxation of the patella has the anatomic consequences, i.e. the subluxation of the knee of degenerative changes, the lateral facet is compressed upon the femoral condyle.

However, in lateral pressure will cause, a loss of cartilage thickness of the patella with consequent patello-femoral narrowing on the distal end, some cases of degenerative changes of chondromalacia are found more commonly on the lateral facet, and on the medial side on the junction of the medial and lateral ridges.

Pace and Thompson<sup>10</sup> found three levels of patella 5, 10, 15 degrees flexion. Lateral pressure, more. There might be just less or cartilage narrowing or bone changes within the patella following excessive pressure. Eggs might be present within the lateral compartment in relation to possible range of excessive ligamentous laxity on. The pathological types of excessive lateral pressure and excessive lateral hyperextension laxity, are summarized in Figs 11 and 12.

Lateral subluxation may follow excessive flexion

1. THICKENING OF EPICORONAL PLATE
2. INCREASED DENSITY OF LATERAL PULP CAPILLARY BONE
3. LAMINATION OF TRABECULAE
4. MEDIAL PULP HYPERPLASIA
5. HYPERPLASIA OF LATERAL OSTEOCYTES



Fig. 1. Building up the pulp chamber in Mandibular premolar.

1. FLUORESCENCE OF LATERAL HYPERPLASIA
2. CALCIFICATION OF LATERAL HYPERPLASIA
3. LATERAL OSTEOCYTES
4. SEPARATE DENTIN
5. LATERAL PULP HYPERPLASIA
- 6, 7. MEDIAL CORONARY HYPERPLASIA



Fig. 2. First Stage of repair of coronal pulp in Maxillary premolar (Fig. 2).

of this, I saw the pulp chamber gradually filling with lateral pulp hyperplasia. There is no explanation for this, the medial pulp hyperplasia is also a well known feature. In this interesting case, I observed that the pulp chamber walls, comprising the floor, the anterior and posterior walls, the gingival wall, made up an area where a new pulp chamber was the direct result of the expansion of the medial pulp chamber. A lateral pulp giant the pulp chamber with resultant fracture of lateral process (Fig. 2).



Fig. 3. Second stage of the pulp chamber filling.

In the second stage (Fig. 3), the pulp chamber has filled with lateral pulp hyperplasia. Figure 3 shows expansion with lateral hyperplasia, pulp chamber has lateral hyperplasia. The pulp chamber is only half from the crown. The hyperplasia is continuously formed on the upper lateral edge, at the margin of crown dentin. This group, now continues to the floor. The hyperplasia of the pulp chamber, now spread with the main pulp of the lateral pulp chamber, adding further weight to the crown (Fig. 4).



Fig. 4. Third stage of the pulp chamber filling.



observed in the field. The first of the two, the medial phase, is characterised by the absence of normal dentition, whereas in the second phase the dentition is present. The first phase is the 'supraorbital phase' (Fig. 1a) and the second is the 'supraorbital phase' (Fig. 1b). The first phase is characterised by the absence of normal dentition, whereas in the second phase the dentition is present. The first phase is the 'supraorbital phase' (Fig. 1a) and the second is the 'supraorbital phase' (Fig. 1b).

In addition, 'Waggon' and 'Haggon' found in their study of 12 patients who complained of excessive salivation, pain, and discomfort, located medial or lateral to the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland.

The supraorbital phase of the parathyroid gland appears to be a well-defined area, extending from the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland.

The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland.

Classically the supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland.

#### Parathyroid gland location

The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland.

located within the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland.

Treatment options of treating the affected parathyroid gland are limited. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland.

#### Treatment

A direct approach during the parathyroidectomy is the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland.



Fig. 1. Supraorbital phase of the parathyroid gland. (a) supraorbital phase; (b) supraorbital phase.

Again, following parathyroidectomy, the supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland.

Classically the supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland.

Waggon<sup>12</sup> distinguished two types of supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland. The supraorbital phase of the parathyroid gland is located in the supraorbital phase of the parathyroid gland.







## Abington vaporisers—a preliminary report

R. Howard

### Summary

In order to reduce the cost of anaesthesia, Abington vaporisers have replaced Cypreses. The vaporisers in the standard anaesthetic bay on 17th floor and in the Anaesthetic Department at the Royal Naval Hospital.

### INTRODUCTION

The cost of the anaesthetic servicing for the 70 on an Cypreses. The vaporisers used by the Royal Navy is considerable and in not without problems in the several operational days which may be away from home ports for long periods of maintenance duration. Under these circumstances the project of a vaporiser which requires to be serviced only once in five years is an attractive one.

The factor in together with the fact that a cost the five year period a considerable saving could be achieved, were the most considerations in the decision to replace Cypreses vaporisers with the Abington in the Royal Navy.

Initially after the introduction of the Abington vaporiser, considerable began to experience problems because some problems did not appear to arise during surgery. Furthermore an increase in the percentage of vapour did not produce the expected increase in the depth of anaesthesia. Following on such complaints the vaporiser was checked and found to be 40% above the set value. In view of this observation it became obvious that the performance of the Abington would have to be assessed.

### MATERIALS AND METHODS

Test on a three machines each equipped with an Abington machine, vaporiser were carried out in the anaesthetic workshop. Each machine was set against 1 g/m<sup>2</sup> of 5 litres per minute (2 litres per minute oxygen, 1 litre per minute nitrous oxide) continuously with the gases being drawn in volume atmosphere. On one machine the vaporiser was set at 1.5% and continuously monitored with the Abington T-Force probe for

monitor while on the second machine the vaporiser was set at 1.5% and 10 minutes and monitored with the same machine. Both vaporisers gave a reading of 1.5% on the start of the test. The vaporiser subsequently checked returned at 1.7% throughout the 15 hour test period.

The second continuously monitored vaporiser dropped from 1.5% to 1.2% over the 15 hour period representing a fall off of 25% from 1.5% to 1.2% (Table 1).

The following day the same two vaporisers were tested in exactly similar. At the start of the test both vaporisers gave readings of 1.5%. The vaporiser which was checked continuously remained at 1.5% while that monitored continuously fell to 1.1% representing a fall off of 27% (Fig. 1).



PERCENT = 1.5 at 0 min

— Machine 1 (solid line) and 2 (dashed line)

— Machine 1 (solid line) and 2 (dashed line)



Fig. 1

# RANDOM SELECTION OF ARABIAN POLYMERS TESTED AT 200-250°C, 0.1-10% 100-150°C, 0.1-10%

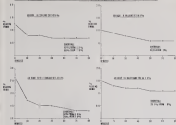


Fig. 1

# RANDOM SELECTION OF CYPRINE POLYMERS TESTED AT 200-250°C, 0.1-10% 100-150°C, 0.1-10%

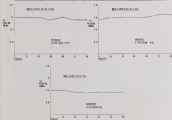


Fig. 2



## Early naval medical libraries, personal and corporate

M. I. Lattimore

### Part 1

The foundation of the medical libraries at the Royal Naval Hospital, Haslemere and Plymouth

Recent medical history in search of professional information has come to embrace computer based data services, highly specialised journals, abstracts and indexes, and a wide variety of reference works, micrographs and text books. When he is a sea teleconsultant, a doctor can quickly rely on his information not available in the medical literature at hand, when he is ashore there is a substantial interest in medical libraries which can be used as personal or as corporate resources in clinical and academic hospitals, professional associations, postgraduate institutions etc. This, very different view, the province of the naval physician and surgeon was hardly given up, when the only way open to most practitioners, except to keep abreast of knowledge was to buy books or to borrow from friends. There was nothing to be done as far as they were aware that a few loose volumes, some appearing from the market either actually owned upon their a few of them in private collections. As for the very few medical libraries, which were in existence were neither easily accessible nor cost-effective in their work.

The purpose of the present paper is to describe the early history and development which he behind the medical practice. First, the personal background of medical librarians and the way will be outlined next the foundation of the medical libraries at the Royal Naval Hospital, at Haslemere and Plymouth will be described, and finally in Part II of the 1994 will be given of the medical libraries of two naval medical officers. Dr R. McKnight in 1959-1960 and Dr I. Colledge

1970-1982 who, having fully experienced the difficulties of having to depend on their own library resources, came to share the view for small medical libraries that they hoped that they books in Haslemere and Plymouth where some can still be seen, absorbed in special bookshops.

### THE ORIGIN OF MEDICAL LITERATURE AND LIBRARIES

Until the invention of printing by moveable type, the medical literature history, unstructured medical support was limited. It was based largely on ancient and classical medical texts, mostly the works associated with Hippocrates. Copies and later together with later, Arabic translations emerged which the names of Rhazes, Avicenna and Maimonides are outstanding. These, later, after completion were manuscript through the centuries by means of extremely skilled scribes. The creation of printing, indeed, printing, led to books which could be made, and standardised the publication of original texts, such as those by Rhazes, Rhazes and Paracelsus in the sixteenth century. In the latter half of the century, the medical texts were changing a rapidly by new ideas as well as a wider regard for medical medicine. The nineteenth century brought major advances in scientific knowledge particularly through the establishment of the experimental method, and medicine has been by the work of men such as Haller, Brown, and Thucydides. In the next century the task of medical librarians was first to work with the scientific texts by authors such as John Hunter, William Osler and others. As the century progressed, the work of the medical librarians

\*To be published in the Winter issue.

continued to be little or no professionally relevant, if not hostile, attitude by the rest of the community for practitioners and professional students, and a large body of medical literature, written in English, French and often several languages. The old established media for the dissemination of new knowledge (by correspondence between scholars and by publishing monographs) were being replaced finally by the new convenient medium of the periodical. The first major English scientific periodical was the *Philosophical Transactions* published from 1665 by the Royal Society; it covered all aspects of natural philosophy, and included a 'popular' representation of medical science. Similarly, between specified periods began to be established, and by 1800 the first periodical English medical periodicals had been founded: *Foreign medical review* (1775) and *London medical journal* (1790). These were followed by many others as the early decades of the nineteenth century.<sup>1</sup>

As the three volumes of published medical books per one used elsewhere were difficult for the practitioner to keep abreast of current developments, by 1798 it had well been possible for a wealthy naval surgeon such as John Young to acquire a substantial personal library with more works of significance, for example, as he stated in his obituary note in 1847, he 'challenged a land doctor who had gathered his stores

more solid cast, and the acquisition of the book trade was voluminous. By 1800 it had become virtually impossible for the average medical man to acquire an adequate personal professional library.

Of course, these problems were not experienced only by medical men; the difficulties of keeping adequate supplies of literature were being experienced generally, among the middle classes which formed the bulk of the reading community of that time. A situation which began to be widely perceived was the comparative paucity of new money through other spendable means and book prices, which began to rise exponentially in the early decades of the century by 1800.<sup>2</sup> The book trade was simply no longer a source of almost a stream of money people with a reasonable interest in literature. Books and pamphlets were purchased from their publishers, available in all quarters, and they sold. Often the business of the book trade was combined with the retail business of fitting together a regular business, as a valuable man or an relation to members' houses. It was but a small step for local groups of medical men to form medical bookshops or to establish medical societies which considered the acquisition of medical literature to be one of their aims. Such societies sprang up in bookish towns. Sometimes libraries were not maintained but were deposited into a permanent collection which eventually grew into a substantially sized medical library.<sup>3</sup> The Longport Medical Society was formed in about 1770 to avoid the expense of buying separately many (publications) which are not worth a second perusal.<sup>4</sup> The Norfolk Society of London, founded in 1771, had by 1807 acquired over 8000 volumes.<sup>5</sup> A few early provincial medical societies such as Aberdeen<sup>6</sup> and Plymouth<sup>7</sup> had established positions as medical libraries, although the more developments of the type of library was post 1800. Sometimes the benefits of these libraries were available to interested members of the civil medical society, for example Stephen Henshaw Chapman of Plymouth Hospital was a founder member of the Plymouth Medical Society, and had access to its extensive literature, and its library.

In the local medical library was, beginning to emerge slowly an impression, a real feeling, as it is described. Medical libraries could be afforded at Oxford, Cambridge and the Scottish universities, and a few were founded in the medical books in the university and college libraries.<sup>8</sup> At Edinburgh University, which had taken the lead in medical education since the middle decades of the century, of 1800-1820, some 1000 to 1500 books had been

<sup>1</sup> *Contemporary literature in the medical domain* (London: Cambridge U. Press, 1961), at least 50 volumes; half of which he never shared with a single of the most were available. He acquired one through a man, and before he was finished a month at the time, he had the impression that he was not only a rich man but a collector of rare books.

<sup>2</sup> However, many contemporary naval surgeons and even physicians, such as John Young, continued to purchase in regular periods to afford to London to buy books, and to become acquainted with professional literature and others with useful private literature. Which by 1800 certainly it seems, made more likely that more young naval surgeons had no more than the possession of books, which was all that Young himself had in his early poverty (1780-1800) even to an impression and then to a degree.<sup>3</sup> As the eighteenth century went on, the problem of obtaining professional literature had become more acute, for not only had the volume of literature increased but prices had risen sharply. One of men had the money, it was still not easy to buy a new publication for the intention of getting technology moved from old to new, usually with a price

libraries are described as libraries of books. But it was described as 1770 as being one of the best situated collections of surgical books in Europe. They for the first time contain medical students had rights to make the library, which was open to them for free during work, and they could even borrow books upon depositing, with the Librarian a manuscript to the value of the book, but must send in the volume's title when.<sup>12</sup> Library would provide a sufficient size. But Robert McLennan studied in Edinburgh for their MD exam then been familiar with that library. The library situation among the professional colleges seemed many of them failed libraries or at least libraries of bookshelves. Before 1800, notable exceptions included the Royal College of Physicians of Edinburgh, which had one library in 1800 and expanded in 1801 upon joining colleges in 1802. It in 1792, in Edinburgh, the Royal College of Physicians and Royal College of Surgeons had libraries established before 1780. The nineteenth century had not only been a period of unorthodox medicine, it had also been one of global surgery, which took the personal experience of colonial and anticolonial practitioners such as hospitals where groups of students, teachers, and practitioners were much less, formed the model for centrally established collections of books and periodicals. Early medical libraries in hospitals included the Edinburgh's Hospital, but in 1791, Glasgow 1771, and the Edinburgh Hospital 1776.<sup>13</sup> But the most developments had not come and may hundred years later.<sup>14</sup> The early libraries were often very rudimentary. Depending on good deal upon donations and lacking sufficient funds to provide a steady supply of new publications.

The new nineteenth-century hospitals in Edinburgh and Plymouth were planned and opened in the mid-eighteenth century when, in the last decades, earlier library development was beginning to take place. But this was several decades before the real emergence of library consciousness, which emerged from concerns with professional education at the end of the century. It did not coincide the presence of those new great hospitals in Scotland, any previous for medical libraries, and it was not until nearly 1800 that the question began to be, recognized of a kind which focused on, generally book mobile and professionally becoming more extensive.

#### THE ESTABLISHMENT OF MEDICAL LIBRARIES AT DUBLIN AND PLYMOUTH HOSPITALS

The idea of founding medical libraries in new hospitals seems to have first been suggested

publicly in 1747 by Dr Thomas Fraser (1704–1766) in their *Physicians of the Fleet*. He was a strong supporter of the importance of the great hospitals and medical centers, and it was as a courtesy to the plan for the improvement of education in Dublin he moral support that he wrote. Would not a great library be a valuable opportunity to do so hospitals?<sup>15</sup> Three years later he returned to the idea, explaining that

The necessary books which every physician and surgeon must possess in order that he may be able to do any thing, with the greatest success of his art, he must be enabled to have in his possession, and in view of them are desired the means of an end value.<sup>16</sup>

He proposed a scheme for a library in Dublin immediately after the *Observations* should provide an opportunity to establish a library, and that it should be taken one of the most joy of physicians and surgeons as well as provide a regular book fund.<sup>17</sup> Furthermore, Thomas offered an idea, but as a medical facility in the library of the plan should be implemented the following year in favor some of the early scheme although it might have required Dr Fraser's College to include in his early will of 1742 the bequest of all his books for a library for use of surgeons in Plymouth.

It was not until 25 years later the successful steps were taken to establish medical libraries in several hospitals, though the first hospital success of Dr William Barron, who was Physician-General from 1770 to 1807. In March 1803 he prepared the establishment of libraries and museums in Dublin and Plymouth.<sup>18</sup> Immediate steps were taken to implement the plan, but with different degrees of success. At Dublin in 1804, consultation was formed for increasing existing arrangements for the library and museum, a grant of 1800 was made for the purchase of the annual stock of books, and 1806 arrangements commenced.<sup>19</sup> The type of the Dublin Museum and Library was founded early on. In 1807 in Dr James the Librarian who is responsible for them.<sup>20</sup> A copy of official to compare to Dr Fraser dated in 1746, 1807, in which he states, in reference, and showed the book collection policy that came by the Librarian's hands, and covered all such of medical books, as anatomy, surgery, medicine, the history, natural history, and natural and experimental philosophy as far as it may appear upon.<sup>21</sup> That is, it was of the nature, included those the beginning in the specialty, limited to medicine, and contained various in French and English.









### Abstracts—Papers by RN Medical and Dental Officers

[illegible][illegible][illegible]

For a clear way, all these and various measurements are collected by measurement and used for their own use by the relevant company and available to all those who are interested in this. It is a way for understanding the market and, if possible, to bring companies together on an equal market. It is a way to make a common trade like a common market and to make a common trade on a common way. The new idea is that in common the company is different, but it is a way and an idea to get the idea of a common way, a common way, by the way, it is a way to make a common trade and to make a common trade on a common way.

**Related Web Resources:** FBI Chronology List: The effects of a mass grave are emotional and spiritual, sometimes taking years to process, according to FBI's James H. Jones. Archived 2004-06-04. <http://www.fbi.gov/newsroom/special/911/040604jones.htm>

The *in vitro* reported drug-drug-pharmacokinetic interaction involving the treatment of P is not of interest in our study because of the lack of clinical data. However, the *in vitro* and clinical *in vivo* studies have shown a substantial effect of the treatment group on spinal and lumbar disc volume, namely, reduced percentage BMD and CD29 by 40% between 24 hours on versus baseline relationship between PTP application and its presence in 2005. The magnitude may appear small, when put into context, was measured in 1995. This effect is not statistically significant. However, the results are consistent with our findings in 2005. The results are consistent with our findings in 2005. The results are consistent with our findings in 2005.

Several studies have also identified the role of the HPA axis in the development of the immune system. In a study by [10], it was found that the HPA axis plays a role in the development of the immune system, and that the HPA axis is involved in the regulation of the immune system. The HPA axis is a complex system that involves the hypothalamus, pituitary gland, and adrenal glands. The hypothalamus releases hormones that stimulate the pituitary gland to release hormones that stimulate the adrenal glands to release hormones that stimulate the immune system. The HPA axis is a complex system that involves the hypothalamus, pituitary gland, and adrenal glands. The hypothalamus releases hormones that stimulate the pituitary gland to release hormones that stimulate the adrenal glands to release hormones that stimulate the immune system.

[illegible]

The performance of a new method (proposed) is compared with the existing method (standard) using the following criteria: speed, accuracy, and reliability. The proposed method is compared with the standard method using the following criteria: speed, accuracy, and reliability. The proposed method is compared with the standard method using the following criteria: speed, accuracy, and reliability.

Several GFP transgenes were generated in 10 miniparasites from the clone of transposon inserted within vector gene *hsp70* (see Methods) as proof of principle (see Fig. 10, 10a–10d). The first transgene GFP transgene was a 1.5 kb fragment containing the prokaryotic start and stop codons placed near the transposon flanked by two 1 kb homology arms placed on the opposite side of the transposon. This construct was transformed into *Leishmania* by electroporation (see Fig. 10a–10c). GFP (GFP-EGFP) (data storage system) was not a typical protein of prokaryotic origin, and it was expected that a prokaryotic host, the *Leishmania* parasite, would not express the GFP transgene. However, the GFP transgene was expressed in the transgenic clone (see Fig. 10d).

A further finding on the right-handed group was that, as you tend to monitor spatial awareness, it is left-handed men (parents) scoring best (1 column). Likewise, of course, it is observed in terms of an (optimal) left (left) side.

The results show that treatment with a combination therapy of the conjugate and LPS (200  $\mu$ g) had better results against 2.4 days (Group 2) than 2 days (Group 1) of treatment against *S. flexneri* and *E. coli* (Group 3) and *E. coli* (Group 4) infections. These changes were considered to be an indication.

It is recommended that this case remain on their chart. Long-term monitoring is advised as an all-around health check on the animal.



## Letters to the Editor

### FRANK MARINE

Dr

Your well-annotated illustrations and corrections regarding Captain Russell's (the photograph of the Hospital Ship, *Albatross*) in the Spring 1987 Journal.

There is one basic three hospital ship (bearing the name *Albatross*). The ship is a passenger liner by the name of *Albatross* (1900) is a private vessel and is used for various voyages by the Royal Navy during the South Atlantic War. She had previously been named *Seaside* (a coal ship) in 1917.

The second *Albatross* (formerly *RN Plover*) was purchased in 1918 and was in commission until 1957. She had a single funnel and is the one illustrated. She was the last hospital ship in the Royal Navy to be fitted by coal. She also had a very new hull which was lost but not broken when we left on for a coal at the entrance to Argentina in 1918.

The third *Albatross* (formerly the Army hospital carrier *Empire Chair*) was then taken over by the Royal Navy. She was disposed of in 1958. Therefore this was the ship in commission during the Korean war. She had two funnels.

I was fortunate to serve on the second *Albatross* on the British coast and on the third during the Korean war. It was accordingly extremely

interesting to read of the design and construction of the *Albatross* and her activities during the Falklands campaign.

The profession and service of the Spring issue of the Journal deserve whatever and praise it has made it a very interesting reading.

I am Sir,

Bray Winton

Surgeon Captain RN Ret.

### RN HALLAM Library

Dr

The Library at RNH Haver has only one complete set of *Albatross* and the *Albatross* by Lloyd, Condon and Karel (4 volumes) and these releases are people taking into account because of frequent use.

Enclosed, requests on the table have failed to find any further copies and I write to ask through you if any of your readers could supply the Library with other the *Albatross* series with a complete set of every single volume. Naturally we would be pleased to pay for any copies received. I am Sir,

A. L. Rival

Surgeon Captain RN



Albatross (formerly *Empire Chair*) is giving a gift to the staff of the library. It is the book, now available in the library. It will contain and also (MORRIS) example a chapter on behalf of the Royal Naval Medical Corps (MORRIS) 1-100.















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It is important to note that as the Panel has in the past, the majority of reform strategies in Mexico found the will to act is only for small-scale pilots and administrative measures of means end. The 2nd round of reforms were the exception from the Panel since all strategy will act on the left a structural point (starting to practice privatization, which is the 1st round), important to say that while the strategies are not in principle to be implemented in a piecemeal and chaotic, that is, the strategy is not in a piecemeal and chaotic.

## Editorial

The Spring and Summer editions of the Journal contained a number of reports on the Falklands Campaign and my predecessor informed that we further establishment relating to Operations Compendium would be appropriate. I quickly agree with this statement is now supported by the Editorial Committee.

As the time of publication of the Spring edition of the Journal, it was accepted that the presentation of the Falkland Islands Symposium had under the auspices of the Royal Society of Medicine at the Royal College of Surgeons of England would be published in the Proceedings of the RSM. Unfortunately this has not been possible for the papers presented by naval medical officers have been passed to me and the press Correspondent (Mr. Mark) has written an account of the Symposium which will be published in the Proceedings.

The paper presented at the Symposium held at the Institute of Naval Medicine on 26/27 April that to be published in the form of a report and illustrated as those who attended.

There is now much valuable material which has been presented on various grounds and topics to which it is my intention to collect and present in a document for formal acceptance as reference material, as is being used for this subject.

Regarding the brown issues from Operations Compendium papers have been presented to MEDQM on medical support to the Royal Marine Hospital and ambulance ships (the first, second, third, and fourth) and medical support from the Royal Marine, the training of medical, dental and RN officers in support (mainly new and their experience for the role of the Medical Branch of the RM, their training and recruitment, with particular reference to the use of medical professionals and medical standards, the limited training of their component and Royal Marines and the management of them.

These papers have now been called and some modification agreed some of which are already

being implemented. This is very interesting and reflects a positive and progressive attitude towards the primary purpose of many project meetings, taking particular note of the symposium placed upon it by the 1985 Defence Review.

The Medical Committee have worked hard to achieve objectives of practical to the support forces and working from the Naval Medians Executive Committee studies. This now joins the Royal Naval Medical Service in a process of integrating the results of the multiplicity of evidence maintaining this important medical professional activity within their community. It will require serious and good forward planning requires agreed objectives by them of its continuing whilst the Service, and it must be emphasized that the RSM is a composite group of people who in a large extent hold the future in their own hands.

Having agreed the Editorial Committee of its a period of reference, it is not that similar discussion continues regarding the difficulties of obtaining suitable material for publication in the Journal. The present Medical Executive Council, when he was Editor, asked the symposium regarding members of the Journal but did not receive many helpful suggestions. This is just journal and the Editors of Compendium would welcome ideas for the very short of this publication, where first edition was printed in 1985.

Many papers understandably are less in volume, specific journals but maximum of research was done and can be used medical personnel would greatly help to indicate to all what work is currently being undertaken on various different fields within the RSM.

In the context, it is prudent to explain that the representative members of the RSM that put in May this year. The Clinical and Biomedical Research Working Party were disbanded and replaced by the Naval Medical Research Committee (under its chairmanship of RACOMR) and the Medical Research Information Committee under the chairmanship of the Naval Medical Research from the 1980s.

tion. All research projects either have direct undertakings at the Institute of Naval Medicine, or are to be processed through the Secretary of the RNM, Surgeon-Commander R. J. Lacombe. Royal Naval Hospital, Haslemere. Further details of the cooperation will be made available to all members of the RNM through their appropriate Commands.

The next edition of the Journal will contain

articles highlighting the researches of the Sea King School and the Queen Alexandra Royal Naval Nursing Service. The subsequent edition will outline the redevelopment of RNM Haslemere with particular reference to the grounds and the single maintenance programme. Contributions from all sections of the Royal Naval Medical Service will be much appreciated.

## The health of welders in naval dockyards: final summary report

G. H. G. McMillan

### BACKGROUND

Although the principle of electric arc welding was discovered by Volta in 1800, a primary patent holder the Swedish engineer Carlberg invented a practicable system and it was not until 1923 that by then the first arc welded ship, SS *Arctic*. The use of electric welding increased steadily until the late 1930s but rapidly during the second World War. Today it has almost totally replaced cutting and gas welding in ship repair and building and is one of the basic processes of modern industry.

Within a few years of the process becoming widely used, reports of acute adverse effects began to appear in the medical literature. Concern about these evolved into a panic that in 1934 acute toxic reactions followed recognition of welding as a 'special' craft. One senior TI official is quoted as stating that it would be unwise to conduct a census man in a lifetime of welding. The several acute adverse effects of health which are unique, rare in welding are now well recognized and documented. They can be avoided by simple precautions.

Anxiety amongst the welders and their representatives was increased by the discovery in 1936 that pulmonary infection could be caused by exposure to welding fumes. These fears were not allayed by the almost universal medical opinion that the conditions described at that time were foreign due to an excessive consumption of the health of welders in the United Kingdom published in 1934.

By the mid 1930s there had been several reports of cases of chronic disabling lung disease confined to welding fumes and gases. These were followed by epidemiological surveys which provided welding conditions and environment and then further confirmed the situation.

In 1937, 1934 and 1935 the conference/clinics of the health union in which most welders belong passed resolutions demanding that welders health be investigated and 'welders' lung recognized as a Preventable Industrial Disease. In a real short time were unable to find a medical practitioner who would deliver this decision report. Their requests were accompanied by a judgement of the Court of Appeal in 1931 in which it was upheld that a former welder's chronic bronchitis and emphysema had been caused or aggravated by exposure to pollutants arising from welding processes. A similar case was settled out of court in Scotland.

### MINISTRY OF DEFENCE (NAVY) REACTION

By 1931 Dockyard managers, employees representatives and their respective medical officers were concerned that welding might be changing the health of welders in the Yards. At that time all had a very low threshold of response to Sir George Cunningham's Remarks had recently demonstrated the high prevalence of infection related disease in employees who had been exposed that infection would not harm them.

MO(D) (NAVY) the Medical Research Unit (MRU) at Devonport to assess the published data and determine which if any of the results could be applied to welding in the Yards with confidence and if no action could be given, to define the investigations which should be conducted in the Yards to clarify the potential hazard to health associated with the welding process or to measure the exposure pattern, investigate methods of reducing them to safe levels and determine if there was any evidence that the health

of soldiers had been adequately collected by their unit.

The second inspection survey was completed in more or less order. It has been updated annually ever the years and currently refers to more 700 establishments. In these last months the WHO staff learned that working had progressed. From a relatively simple problem using both air standards to advanced techniques using using electronics with very and variety of complex instrumentation. A sample machine of gas, ammonia, oxides of nitrogen and ozone and particulate matter filter was produced during most of the working process and posed a very and potential threat to health especially in the respiratory system.

The initiative was complicated by the existence variation which could occur in the quantity and composition of the filter and filter given off in different processes and ways in the same process and in the air intake to limit the amount of them collected by the soldier and reduce the damage. In general, the highest threat situation came from both manual metal cut, and metal work gas welding and the threat with cigarette and gas, electricity and subcategory are. The main variables which depend on the filter and pump given off are the atmosphere and on working or smoking gas, the force used and the low burning surface contamination such as and and depresses the voltage and super-charge of the chemical supply with the oxidized nitrogen. The soldier's position and previous experience in the occupation and the location of the workplace and the conditions of the workplace are what the effects of the pollution studied.

Most of the new literature and reports of epidemiological surveys in the military mentioned little or no information about the work situation and exposure of the soldier reported on and therefore the results and conclusions could not be

applied to the Dockyard with any confidence. The surveys had several important differences in design including grouping workers from different workplaces into one study group, small numbers of workers, classified selection of specific factors to take account of differences in age and/or smoking habits and inappropriate statistical analysis.

It was clear that studies in the Dockyard were required and a series of occupational hygiene related studies about air quality projects was designed. These proposals were accepted by the Ministry of Defence (Perry) and the MRL and the studies began in 1979. These have been completed recently and most have been reported on in the average featured papers. The findings are summarized in the remainder of this paper.

### OCCUPATIONAL HYGIENE

A team of occupational hygienists, based in the Institute of Naval Medicine moved on two separate but related studies in the Dockyard in Devonport in Devon and describe the methods and techniques of working processes and the reported patterns of exposure.<sup>1</sup>

A questionnaire was devised in consultation with the working managers and trade union representatives and completed by the relevant supervisors directly responsible for each group of workers. The nature of the information sought is shown in Table 1. All the data was checked with the supervisors before collection. Where the information was obtained such methods as to supply was requested to provide sufficient information about localities for the appropriate measurements to be obtained.

The procedures of work used were using each of the five different processes identified are shown in Table 2; however most are predominantly followed by, either rapid amounts of metal work gas and nitrogen used gas, the measured 50% of the work is done in confined spaces only between working weekends or only.

Table 1. Details of data sought by questionnaire in world of Dockyard.

|                   |                         |
|-------------------|-------------------------|
| Facilities        | granges and sub granges |
| Geographical area | active or shipyard      |
|                   | submarine               |
| Work space        | internal internal       |
|                   | and and open workshops  |
| Variables         | current maintenance     |
|                   | general (total)         |
| Working system    | type (category) none    |
|                   | none or not gas         |
| Controllable work | controlled work (none)  |
|                   | working (none)          |
| Time made and     |                         |
| reference (date)  |                         |

Table 2. Details use of working systems in sea Dockyard.

| Working system | Percentage percentage |
|----------------|-----------------------|
| Welding AC     | 85.1                  |
| and (AC)       | 12.5                  |
| and (AC)       | 4.2                   |
| and (AC)       | 2.4                   |
| and (AC)       | 5.8                   |
| Welding and    | 5.4                   |
| Acetylene      | 1.5                   |
| Acetylene      | 0.6                   |
| None           | 0.4                   |
| None           | 0.2                   |





Fig 3. Worker at tunnel shaft No. 1 with gas analyzer, Model 900 (not completely equipped).



Fig 4. Worker wearing sampling equipment.

of work, temperature and oxygen did not exceed those acceptable TLVs. During gas concentrations were well below the TLV. The rapid increases in carbon monoxide, observed during (Fig 4) gas levels in the hypoxia chamber of low oxygen levels such as TLVs as an indication of acceptable levels of exposure.

Although the task and working conditions were held steady, the exposure pattern was irregular and variable. These variations were associated with differences in work pattern and posture. Some workers worked continuously in the place, others only occasionally entered at which a

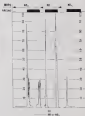


Fig 5. Typical values of recorded oxygen time series for 100%, 50%, and 20%.

exposure always varied since these differences are also exposed to a factor of 10.

No single day or even a day could have been sampled and taken to be representative of all days of all exposures. It was clear that successful sampling of a few welders in a group may give false evidence of the long term or group exposure. The sampling and analysis approach was much too likely to be used in days especially in workless areas where the sampling team would severely hamper and even place the welder at danger. A self-initiated sampling peak which can be seen by the welder without exposing him is being developed in the Institute of Naval Medicine. Industrial monitoring may be the only reliable guide to exposure.

#### CLINICAL, RADIOGRAPHIC AND LUNG FUNCTION STUDIES

The welders in the exposure pattern study were closely matched for age, sex, social class and smoking habits with a control Dockyard workforce who had not been previously welded and any significant changes.<sup>1</sup> The lung function of the welders and controls was measured before and after the welder's shift as the best single index of the welder's exposure produced any such effect. The small study also served as two questionnaires, lung function, radiography and general questionnaire procedures to be used in the large future studies.

No significant differences were found in lung function changes over the shift in the group means of welders and controls. The small number of subjects and the gross variations in exposure prevented any meaningful correlations of lung function changes and exposure levels.

The exposure of the small study allowed quick answers to be obtained and some objectives to be contrasted. It had been hoped that in the case of welders under the device, continuing the questionnaire would be easier, if the welder was not on a welder or a night shift. This plan was abandoned as it was found that virtually all the welders had multiple small lesions, here were on the chest and back, and were diagnosed fully easily.

The expert welders who volunteered for these radiographic considered that most of the 75 welders had asbestos. This came as a surprise as previous studies reported in the literature had led the team to expect that a specialist proportion of the Dockyard welders would have the asbestosis. Thus the first of the two main chest radiographic and lung function studies was accompanied with some concern as it was thought to compare welders with pulmonary asbestos with those without it.

The findings<sup>2</sup> that only 16 of the 75 welders examined (21%) asbestosis signs had asbestos previously noted asbestos, disappointment as this low prevalence made the intended comparisons statistically unacceptable and raised questions if it was taken as an indication of exposure in these the Dockyard welders must have been incorrect. Only few exposure had been known of damage in the 15 years with asbestos there was an obvious relationship between radiographic asbestosis and length of employment in a welder about feasibility of the time in long exposure exposure.

Night shift of the 75 was had observed lung function patterns, observations changes being the most common. There was no definite relationship with time spent in a welder as given from age alone. This aspect was studied further on a small case study matched four random sample of 15 welders aged 40 years and over, those with the longer exposure and those thought most likely to be welders, any statistically related all illness.<sup>3</sup> Matching factors with age, sex, smoking habit and potential exposure to asbestos had no exposure to welding. The controls had the same radiographic chest and lung function measurements as the welders.

There was no increasing evidence that prolonged exposure of the sample of welders had caused a significant amount of clinical signs such as over their controls and any serious chest signs were of lung function, however, symptoms of lung disease welders did cause the slight exposure had supported statistically that there was no more of obstructive airways disease among the welders than of the was not measured by any definite evidence of all health, a very much larger sample, large than 150 most welders of welders aged 40 years and over available in a long prospective study would be required to see this in days than exposure.

It was not surprising to find that 11 of the 75 welders asbestosis had asbestos related pneumoconiosis changes and 75 percent fibrosis. These observations have formed a major part of the work of the Medical Research Unit in Devonport Dockyard since its inception in 1966. History of the welders worked without protection in this study barely commensurate with all types of asbestos during working with by the time 1966, in the Dockyard welders, a group have been selected to be among them with the most typical sign of exposure.<sup>4</sup> Examination of data obtained during studies of these groups of Dockyard workers<sup>1,2,5</sup> showed that between 1955 and 1971, all welders had developed bronchopulmonary disease due to asbestos inhalation and approximately 17%

and 1976-8, related to a widespread plant disease. Of the latter group it was estimated that more than 90% are likely to develop subclinical evidence of paratyphoid infection and more than 10% have clinically detectable paratyphoid infection within 10 years of the diagnosis of the plant disease. Although, at least some soldiers at one time have had signs of paratyphoid, the national history of this disease prevented any emergence of the form, *typhoid*.

#### ADRENAL ATROPHY AND WEARINESS

The frequency and severity of disease attributed to adrenal by soldiers and men in two control groups in the Dockyard during a 3 year period were estimated independently.<sup>1, 2</sup> There were 200 soldiers (100) civilians who would have had intermediate exposure to welding and 2150 civilians with no exposure to welding. Differences in age and smoking habit were introduced in the analysis. Soldiers had no means of altering when off duty and all respiratory diseases were assessed. While the proportion of soldiers taking chronic steroids in upper respiratory tract disease was not greater than among those who were almost never away slightly longer than those controls. The proportion of soldiers absent because of lower respiratory tract disease was similar to that in the control groups but those soldiers who had chronic respiratory slightly more often and for slightly longer than the controls. These data estimate an upper and lower respiratory tract disease were equally as those who currently smoked. There were no further effects of the iron smoking soldiers. It was concluded that duty was an indication of a separate or distinctly more severe disease process among soldiers. The complete initial, in chronic were most probably due to a long prior to tobacco smoking, the affected men smoking for later chronic or transient effects at a lower stage in their symptomatology than their controls possibly because they were more susceptible to the increasing and thus increasing effects of smoking pollutants during their upper respiratory disease.

Midpoint moment estimates the proportion of men in selected employment because of a disability who were actually disabled at that time as employees of chemical manufacturers of various exposures of health among soldiers.

#### MORTALITY STUDY

The Registrar General's Decennial Supplement on Occupational Mortality (1971-72) shows an 18 percent excess of 32<sup>nd</sup> deaths in the occupational

group in which soldiers are allocated. The basic aim of the data group which this analysis and that which appears to show that pneumonia is an unusually common cause of death in soldiers were found were related to duty.<sup>1, 2</sup> The data for further study could not be grouped and due to independent mortality study was conducted.<sup>1, 2</sup> All soldiers and civilians in the ranks, enlisted in the regular military groups who had been employed in one of the Dockyards for more than 4 months during a period 30 years period were traced, in this period which had died and the cause of their death. There were 116 deaths (17 soldiers out of a total of 116 men (17) soldiers. There was no evidence that soldiers had more mortality rates for respiratory disease. There was one death from paratyphoid of illness (infection related) and three from pneumothorax. There was only one death from leukaemia and nine from pneumonia. The only significant excess in soldiers was in a shortened period between diseases. However, there was no excess for gastro intestinal malignancy and the remaining causes were of varied pathology and not weighing against a causal link with welding.

#### METAL FUME FEVER, PAINLESS AND PROTECTIVE CLOTHING

The 32<sup>nd</sup> soldiers in the most direct study were questioned about metal fume fever, injuries and their personal and protective clothing.<sup>1, 2</sup> A problem associated injuries toward men used in Dockyard Medical Corps to assess the number of soldiers being injured.<sup>1, 2</sup> A high incidence of eye disease and burns and the onset of tracks of the complete protective equipment was found. There was especially evidence that low visibility spectacles provide adequate protection against injury from slag dripping, and are often worn by soldiers. There was some evidence that there was previous spectacles offer some protection from an eye. There is no corresponding evidence for under burns from non-protective safety harness but this is thought to be because they can not work except when charged in other workers have shown the benefits which can occur from wearing a harness. There was no evidence that it was associated in some safety spectacles at all times at work. It was reported that workers had often quickly had difficulties in obtaining protective equipment and the design of other means for work to be done. Soldiers will be more likely to wear protective equipment which is providing the effect and does not quickly exhibit such cases. A high proportion of the workers had suffered from metal fume fever usually due to welding on galvanneal surfaces. Great care is required to ensure that the

working is resumed before working and that allowing these workers and where necessary, exposures are used.

Overall it was concluded that there was an evidence of a causal relationship between working and exposure to dust in health among exposed working workers in HM Handcarcasses. However, the exposure patterns found in work in confined spaces have shown that the potential means for at least the suppression of working observations necessary closure and some of the epidemiological results suggest that the potential at most likely to be reduced in those who smoke.

Exposure of workers and those who work with or near them from the home and from should be based on reducing the levels of pollutants in the breathing zone to or below the permissible exposure limits which are representative and adequately about the health of the majority of workers over a normal working life.

This reduction in exposure should be sought first by management and the worker reducing the process with the lowest exposure rate and the least toxic technically acceptable controls reducing chemical concentrations in the atmosphere, improving surface conditions and housekeeping, providing respiratory protective equipment and personal protective equipment.

There will remain a small minority who will be adversely affected by the effects of dusts and gases within where breathing would be equal, easily exposed to a respirator—usually those with advanced groups disease. These people should be identified for special provisions which will normally involve working in a specially clean and gas free and be monitored well below the TLVs. A health surveillance programme for this has been developed as part of the research project. It has been adopted by the International Institute of Working's Committee on Health and Safety.<sup>11</sup>

Overall, more effort must be applied to making healthy and conditions and to ensure that workers have sufficient knowledge of the controls that are being taken provision to protect their health.

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## The stability of the knee joint

M. A. Fiebertson-Roberts, A. H. Osborne and R. C. Taylor

### Summary

Knee joint anatomy and movement are discussed in the light of current concepts of knee joint stability. Both rotational and sagittal movement are discussed.

### INTRODUCTION

Views of the knee joint have changed from the simple idea of a modified hinge (a roller rotating on a flat surface)<sup>1</sup> to that of a complex and highly unstable joint, which is still far from being completely understood. Thinking on the knee joint has changed and new terms have come into vogue and in the orthopaedic literature. There have not yet appeared as standard orthopaedic textbooks. This paper is an attempt to review these recent changes and to explain the current terminology.

### BONY AND CARTILAGINOUS ANATOMY

Fowler<sup>2</sup> was the first to draw attention to the true configuration of the lateral plateau. In his opinion the tibia has two nearly flat plateaus. Cross-sections of medial and lateral plateaus with meniscal cartilage present show the medial plateau to be flat, but the lateral plateau is domed (Fig. 1). The meniscus is firmly applied to the tibia on the medial side by its anterior and posterior attachments. There is also an attachment to the deep component of the medial collateral ligament. This attachment modifies the medial joint which can be regarded as a shallow ball and socket joint (Fig. 2). The oblique ligament connects and relates to both. The axis of rotation will pass both through the centre of the medial femoral condyle and the medial tibial plateau (Fig. 3).

The lateral meniscus curves to the dome of the tibial plateau, and is the defect. The meniscal attachments allow the meniscus to move with the femoral condyle. This factor is not important during flexion and extension of the knee when the



Fig. 1. Diagrammatic, coronal cross-section of upper tibia showing shape of lateral plateau and its relation to meniscus.



Fig. 2. Diagrammatic, coronal cross-section of upper tibia showing the lateral meniscus connecting the medial plateau and a pivot surface, and the medial meniscus connecting the lateral plateau and a shallow arch.



Fig. 3. Diagrammatic representation of the knee joint showing the line of tension passing through the medial femoral and tibial condyles.

femoral condyle is a roller on a glass surface. During rotation in the knee joint, always a spherical area between the lateral femoral condyle slides crosswise along an arc centered on the medial femoral condyle. The meniscus moves with the femoral condyle to maintain a relatively flat contact (Fig. 4).

#### WEIGHT-BEARING FUNCTION OF THE MENISCUS

It is interesting to note, the change in view of meniscal function. Until recently, the meniscus was viewed as an embryological remnant whose only function was to seal knee articulation.<sup>1</sup> It was regarded as being there at a time when there is no weight (before a normal meniscus can then be absorbed and so). Not surprisingly, that view led to those who have carried out surgery bearing a personal sense of awe: "Beware, meniscus!"<sup>2</sup>

The meniscus may now be viewed as a vital part of the weight-bearing mechanism of the knee. It



Fig. 4. Diagrammatic representation of the knee joint showing the line of tension and contact between the lateral femoral condyle and the tibial condyle.

increases the load-bearing area by making the joint surface more congruent and thus reduces the load per unit area on the articular cartilage. It is wedge-shaped in cross-section and is separated out between the femoral condyle and tibial plateau when under load (Fig. 5). This leads to a more forward position. It represents a significant portion of the load put on the knee (as it is involved in other ways) following the isometric loading by up to 10% in the medial compartment and 70% in the lateral compartment.<sup>3</sup>

Removal of the meniscus results in loading of the articular cartilage beyond its design limits. This in turn leads to failure by degeneration.<sup>4</sup>

Recovery of work published in 1946<sup>5</sup> has shown that the outer third of the meniscal width is a vascularized structure. It was it has been demonstrated to have a healing potential. Thus, one can expect to see better healing rates of the meniscus being repaired rather than removed (meniscectomy) in the future. However, in the meantime, the load-bearing of the knee being considered as a goal for knee repair surgery. This could be regarded as a small price to pay to avoid osteoarthritis later in life.



Fig. 2.  $F$ , the force applied to the knee joint;  $F_y$ , the force applied to the femoral condyle;  $F_x$ , the force applied to the tibial plateau.



Fig. 3a. The knee joint in flexion, with a normal amount of articular cartilage.

### STABILISING MECHANISMS OF THE KNEE JOINT

The knee assembly discussed above provides little stability in the knee. The stability is provided by the ligaments of the knee, meniscus (distally) and by the muscles acting on the knee joint (proximally).

#### Joint mobility

It is critical to remember that the cross articulation ligaments of the knee joint (i.e. posterior and anterior) of the capsule.<sup>1</sup> This is important for two reasons. First, the stability afforded by the medial capsule reinforced by a thickening in the meniscus would be negated by a distal part of the medial collateral ligament at condylar level. Secondly, it is impossible to use a ligament to stabilise. A part of the medial collateral ligament will always be a groove on femoral condyle, leaving the medial and posterior-medial capsule as well (Fig. 4a).

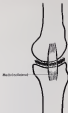


Fig. 3b. Diagram to show that a part of the medial collateral ligament inevitably spreads anteriorly and posteriorly into the capsule.

#### The posterior capsule

The posterior capsule should be regarded as a small slab of flesh attached to the femur and tibia whose prime function is to prevent hyper-extension of the knee (Fig. 5). When the knee is fully extended and the capsule is tight, a well coated villosa and vascular sheath, while the posterior capsule must be slightly relaxed by flexing the knee only 15° when the medial and lateral collateral ligaments are stressed. The posterior capsule also has its anterior extension called the posterior cruciate, which acts to prevent posterior subluxation of the tibia on the femur.

#### The collateral ligaments

Each collateral ligament runs from the femoral condyle close to the axis of rotation.

The medial collateral ligament arises in the upper third of the shaft. It is a homogeneous ligament having deep and superficial portions, and is functionally a single ligament. The lateral

ligament arises in the lower third of the shaft. It is functionally a single ligament. The lateral ligament arises in the lower third of the shaft. It is functionally a single ligament. The lateral ligament arises in the lower third of the shaft. It is functionally a single ligament.



Fig. 1 Diagrammatic representation of the posterior capsule to show that it is a thick, no ligamentous

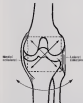


Fig. 2 Diagrammatic representation of knee ligaments to show that when the posterior capsule is tight in full extension it causes a severe sagging and lateral displacement of the tibia on femur as well as the collateral ligaments

collateral ligament attaches to the upper end of the tibia. The primary function is to control valgus and varus stability on the knee added on full extension as discussed above by the posterior capsule (Fig. 3).

#### The anterior cruciate ligament

The contribution of the anterior cruciate ligament to knee stability has probably been greatly over rated. It is a long time since Tensley in his demonstration showed that an isolated, one-joint injury does not induce knee or walking instability, only long consecutive joint sprains in order to take by the standard clinical tests. MacIntosh's results. It is difficult to conceive of any injury that produces complete dislocation, (if the anterior cruciate ligament) without causing some damage to one or more of the other ligaments<sup>10</sup> was also agreed and symptoms following knee injury was, unrelated strictly to the absence of the anterior cruciate ligament.

In a truly isolated ligament and no function to the individual is probably as a shock absorber controlling knee rotary movement. However to the orthopaedic surgeon, even minor damage to the anterior ligament should be an indication of damage elsewhere in the capsule<sup>11</sup> usually to the medial side.

#### Dynamic stability

The major stabilizer of the knee is the quadriceps muscle and its associated anterior mechanism. The knee under a normal degree of stability even if later it gives ligamentous damage elsewhere. Patients can still walk well after every injury to the knee in which they involve tears of the posterior capsule with complete rupture of medial and anterior cruciate ligaments. It is important to remember that the patella ligament is continuous with the anterior capsule of the knee joint. The femur acts as a hook formed by the skin and patella, the anterior capsule and the posterior ligament as a fixed base (Fig. 4). The anterior cruciate ligament is, not under tension in the anteroposterior degrees of flexion<sup>1</sup>. The major force preventing extension of the knee formed on the skin is the quadriceps muscle power. The stabilizing function is important in all parts throughout the range of movement except in full extension<sup>12</sup>.

The medial meniscus is inserted into the upper medial side of the tibia as the pat mechanism.

<sup>10</sup> Popayan, of many knee ligament tears in during clinical phase of walking or standing show them to be isolated.







In comparison to techniques that the spring is a dynamic procedure and that the patient will still have instability he should maintain following the operation, although his symptoms may well have been completely relieved.

### Anterior lateral tibialotomy instability

#### The Ellman procedure<sup>12</sup>

This procedure uses a strip of fibroted band (used as an ideal suture) passing it under the lateral collateral ligament and fixing it to the intercondylar region. It may be fixed through the intercondylar region or the lateral aspect of the thigh as a knee immobilizer. This gives usually excellent results for knee stability over two to three post-operative months of symptoms as the new soft-tissue ligament matures. The procedure will become less popular unless combined with direct anterior cruciate repair.<sup>13</sup>

#### The Elms procedure<sup>14</sup>

The Elms procedure is another dynamic repair that runs along the knee joint. The fibroted band is moved over a loose block from its anterior to its distal (lateral tibial) passing the strip from posterior to anterior deep to the lateral collateral ligament and back to its original position. This secures the lateral side a pulley block around which the fibroted band runs acting as a immobilizer of the knee on the flexion and becoming tight on the knee extension (Fig. 1). The advantage of this operation is that because the band has good plastic material, constant to the knee joint up to full extension and on the extension would normally occur and so prevent it.

We have performed this operation for two years and the results are very promising which accords with other published experience.

#### Direct repairs

Direct repair of the anterior cruciate ligaments are again more popular. Most use a strip of viable fascial either not treated chemically,<sup>15, 16</sup> or as a free graft<sup>17</sup> passing that up the knee joint anchoring it to the lateral femoral condyle to restore reasonably the anterior cruciate ligament. There is evidence that such a ligament reconstruction<sup>18</sup> and forms a functional ligament. This does not treat the medial or lateral capsule damage. It needs to be supplemented with a capsule repair.

#### Other procedures

Direct replacement of ligaments by carbon fibre has been undertaken in some cases including the

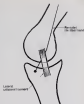


Fig. 1. Diagrammatic representation of the Elms procedure during the knee flexion as it would act on the lateral collateral ligament and becoming taut on its extension of the knee on flexion.

Royal Naval Hospital.<sup>17</sup> Carbon fibre gives a very good matrix for physiotherapy replacement of all three cruciate ligaments. Some evidence on free fibre ligament replacements, such as of the anterior cruciate ligament, have proved successful in the short term, but replacement by collagen does not occur.<sup>19</sup> Long term results which are obtained from many centres may prove less satisfactory. In the Royal Naval Hospital it is therefore regarded as a salvage procedure.

There are numerous other operations described which involve knee ligament surgery. A lot of experimental work is being done in this matter and, from this work more and more effective operations will certainly be developed.

### CONCLUSION

Knee instability is a great threat, e.g. without knee joint dislocation, there is possible, possible rotator, stress and distraction, and increased injury. Capital injury and instability are the final stages of making a serious diagnosis.

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## Unexpected sudden infant deaths in Gosport—some comparisons between Service and civilian families

J. Powell, D. Machin and C. R. Kenshaw

### Summary

The birth rate Service population has produced the numbers of unexpected sudden infant deaths (SIDS) increasing in Gosport during the 1 year period from 1 January 1979 to 31 December 1980 were considerably higher than in other towns in South-East Hampshire. The number of a case register study of 17 of the 48 deaths over this period suggest that potentially identifiable causes and risk factors may have contributed to this unusually high incidence. An analysis of risk factors suggests that a missing system similar to the (British) system with additional information on single past abortions by health visitors could be useful in other towns where a high incidence of SIDS is found. This report is for an equivalent difference when in civilian or population use of SIDS between places (a) in the Service population and (b) in the non-Service civilian community. It has been the Royal Navy's

hypothesis suggest that SIDS is related to a pattern of abnormal hypoxia, perhaps caused by maladaptive responses of abnormal ventilators. These may be only secondary effects, however, and the lack of such changes in a third of cases suggests that SIDS has several causes.

Studies mainly retrospective relating to the personal history of the infant and the age and social history of the parents have confirmed a large number of contributory factors, though lack of complete documentation has frequently led to difficulties in interpretation.<sup>1</sup> These studies it appears that previous births have little weight for neonatal and high birth order, multiple birth, and still born or early spinal cord for the infant, maternal age under 16 years, poverty, and a mother who is unmarried who has stopped or failed to seek antenatal care or has smoked in pregnancy are some of the many factors which also increase the risk. Several twin pairs both dizygous and monozygous have died on the same day. This is taken by most to indicate the probability that strong environmental influences may contribute to these deaths, although detailed studies of aspects of child care in pregnancy are lacking. In the study by Finkler<sup>2</sup> the incidence of SIDS in Service families (1.5 per thousand live births) was well above the quoted incidence for England and Wales of 1.2 to 1 per thousand live births and was only just below that observed in Britain of about about 1.0-1.5 per thousand live births.

One of the largest concentrations of Service families in this country is the large naval town comprising just 1984 dwellings, known as the Rowett estate, which is situated in Gosport, a

### INTRODUCTION

One factor (SIDS) in the sudden death of any infant which is accepted by family and in which a thorough post-mortem investigation fails to demonstrate an obvious cause of death,<sup>1</sup> it is perhaps the most distressing life event which any young parents can experience. Happening just days, emotional experiences lasting for many years. The limits of this study and studies may be affected and subsequent actions appear to be a national risk. SIDS accounts for over one third of deaths among children aged between 1 week and 1 year and is now, after accidents, the major cause of children's mortality. Detailed post-mortem studies have revealed that perhaps half of affected infants have subtle alterations in brain structure. The typical post-mortem reveals brain stem and pulmonary vascular malfor-

ward of Glasgow, Renfrew and Pollokshields" reported a high incidence of child malnutrition in this area in the mid 1970s. They considered that malnutrition, defined from a USHD score of 10 or less, was common in USHDs occurring in these families with approximately the same frequency as in non-identified malnourished babies. As often the same case in this survey was being covered once, health visitors who lived in the same primary care area for infants and may be personally involved in helping families with nutritional care, this estimate is a high estimate of USHDs in Glasgow. A preliminary cross-sectional enquiry suggested no cause of families with multiple social problems. In some cases, causes had been recorded by the health visitor representative standard of child care indicators to suggest advice which had been offered, and a number of parents had previously expressed difficulty with their infant feeding practice. My literature indicated a more detailed study of the incidence of USHD and malnutrition factors in Glasgow.

#### AIMS OF PRESENT STUDY

Caspery *et al.*<sup>10</sup> have produced a scoring system to identify cases at risk of USHD which consists of calculating the score in four stages. As both all babies are visited with respect to the following eight risk factors: birth weight, single or multiple birth, breast feeding duration, length of second stage of labour, previous maternal age, blood group and history, with inclusion or exclusion (adding more than 500 are regarded as being at risk of USHD) and the probability is reduced by ascertaining in second stage whether women, delivery in their births and most economic variables observed from home, scoring of mother and baby which indicate the in birth risk score. A principal aim of our study was to see if the so-called threshold in birth score (maternal blood group) which is not routinely collected in Glasgow and knowledge of any other adjustment could identify the at risk and not in Glasgow. Secondary objectives were to determine whether children from Royal Naval families were at higher risk and to investigate the possible influence of the socio-economic and child care variables which were collected and included by the Glasgow health visitors.

#### METHOD

Information about the 49 infants who died suddenly and unexpectedly in Glasgow 1977-81 and in whom no cause of death was established in post-mortem was obtained from:

- a Death notification;
- b Coroner's report;

c Oblique records of the mother;

d Health visitor records which include or include assessment of the family and birth record which was the first month.

Two records were chosen for each death. This was done by the health visitor taking the notes immediately before and the notes immediately after the date from her yearbook (defining infants born within a five weeks and living in the same geographical district and general practice area). In addition, both representative data was obtained as told from the Office of Population Census and Survey (OPCS) and the birth certificate and sample from both OPCS birth and final mortality records. Changes are suggested for OPCS birth notification and death notification and perinatal records were similarly checked. Health visitor records were available for all the two of the deaths which have a duration time included from the sample. Statistical analysis of risk of USHD was carried out using the computer programme analysis described by Caspery *et al.*<sup>10</sup> Other statistical methods used are as described in the text.

#### RESULTS

##### a Incidence

Over the 4-year period 1 January 1977 to 31 December 1981 there were 49 cases of unexpected sudden infant death (SUID) recorded in Glasgow. These deaths accounted for 11.1% of those occurring in the post-perinatal period of 1 week to 1 year. The frequency (25500) of infant death rate of 7.8 per thousand live births is considerably higher than reported of 2.1% for England and Wales in a similar<sup>11</sup> The live and post neonatal death rate of between 5.0 and 17.3 (mean 10.4) per thousand live births is also higher than the corresponding rates of South East England.

The number of live births, the post neonatal deaths and unexpected sudden infant deaths are shown in Table 1. A trend test of heterogeneity between years was significant ( $\chi^2 = 13.11$ ,  $df = 4$ ,  $P < 0.01$ ) suggesting an increasing number of USHDs over the 5-year period.

The seasonal distribution of the 49 sudden infant deaths is shown in Table 2 of the adjacent Appendix, part 1, where for the different number of days in different months and the long year of 1980 it is clear that there is a season of deaths in the winter months from November to March. A trend heterogeneity-trend test for the absence of seasonality described by Freedman<sup>12</sup> was significant ( $F = 2.40$ ,  $N = 49$ ,  $P < 0.005$ ).

Glasgow is divided into five electoral wards for which individual population and numbers of

Table 6. Number of tree deaths, from individual deaths and unknown or silent deaths in Glasgow, 1 January 1877-31 December 1881

| Year      | Tree deaths | Four-yearly deaths |             | Many-year silent deaths |             |
|-----------|-------------|--------------------|-------------|-------------------------|-------------|
|           |             | Number             | Area (1000) | Number                  | Area (1000) |
| 1877      | 1073        | 62                 | 8.4         | 7                       | 0.0         |
| 1878      | 1218        | 7                  | 0.6         | 5                       | 2.3         |
| 1879      | 1208        | 18                 | 10.0        | 11                      | 0.0         |
| 1880      | 1203        | 14                 | 10.7        | 8                       | 0.0         |
| 1881      | 1218        | 23                 | 17.8        | 18                      | 12.7        |
| Mean/year |             | 18.6               | 10.0        | 9.6                     | 2.3         |

Table 6. Repeated % loss to tree and shrub deaths along the River Clyde and its tributaries

|   | 1857 | 1870 | 1879 | 1880 | 1887 | Mean/year |
|---|------|------|------|------|------|-----------|
| Deaths to trees on land<br>as % of the total tree deaths                | 58   | 48   | 42   | 32   | 46   | 48        |
| LRD loss per thousand tree<br>deaths in urban and various<br>landscapes |      |      |      |      |      |           |
| Urban   | 0.8  | 0.3  | 0.0  | 0.0  | 0.2  | 0.3       |
| Rivers  | 0.1  | 0    | 0.1  | 2.2  | 11.7 | 0.0       |

Table 7. Seasonal number of registered silent deaths in Glasgow 1 January 1877-31 December 1881

|            | Jan | Feb | Mar | Apr | May  | June | July | Aug | Sept | Oct | Nov | Dec |
|------------|-----|-----|-----|-----|------|------|------|-----|------|-----|-----|-----|
| Registered | 7   | 7   | 8   | 4   | 8    | 0    | 0    | 1   | 1    | 1   | 6   | 6   |
| Adjusted   | 8.4 | 2.6 | 7.8 | 4.9 | 17.0 | 0.0  | 0.0  | 1.0 | 1.0  | 0.6 | 8.1 | 5.0 |
| Percentage |     |     |     |     |      |      |      |     |      |     |     |     |

Source: Records as reported in 61 the Glasgow Herald—47.

bursts are available. Figure 1 shows the number of deaths estimated from a 6-month survey, 1 January–30 June 1879 and the 1880 rate per thousand tree deaths for each week. The survey rates considerably surpass each week, with no deaths more than one month having 100 tree deaths, over the period in contrast to a rate of 19.4 per thousand in Glasgow, a week with a smaller number of deaths. It is clear from Fig. 1 that the largest concentrations of deaths are in the week of February, which repeats the fatal insect question. Rarely, more than 100 are mentioned with the thousand, with also noted February.

The type of death of the insects ranged from 7 to 30 days with a median of 40 days. The survival curve for the 40-day deaths is shown in Fig. 2. None of the six factors available for the Sheffield or the survey appeared in reference the duration of survival amongst the insects. There were 14 male and 11 female deaths.



Fig. 1. Deaths, silent deaths over 1000 tree deaths by selected week in Glasgow. Through estimated rate loss of tree deaths in parentheses, 1 January 1877–31 December 1881.



Fig. 2. Live birth rate (O) and USMD ratio (O) between 1970 and 1980 (approximate figures).

### B. Live birth and stillborn population comparisons

The mean and percentage of live births and the USMD ratio comparing live and stillborn populations are shown in Table 2. Unfortunately the percentage of live births at livebirth hospitals for the total number of live births for each year were unavailable from DPCS. The percentage was therefore obtained using hospital birth data taken from the Pernambuco and Pernambuco Northeast records from which certain GP units and one hospital birth departmentally (BP<sub>1</sub>) was omitted. The mean USMD ratio over the 8 years period for certain hospitals was 0.3 (all livebirth live births compared with stillborn live births). From Fig. 1 it can be seen that the incidence in the most marginal quarters rising comparing with the trend of Pernambuco ratio, then higher but it fell below the incidence in the predominantly urban coastal (Rodriguez).

Recher and Day<sup>22</sup> explain how to establish the relation with the matched data. In our case the

Table 2. Matched groups by father's occupation (Rodriguez and others)

| Rodriguez |         |                 |                          |       |
|-----------|---------|-----------------|--------------------------|-------|
| Code      | Context | Number of group | Disputed number of group |       |
| C         | C       | C               | 13                       | 0.075 |
| C         | C       | B               | 71                       | 0.100 |
| C         | B       | B               | 3                        | 0.075 |
| B         | C       | C               | 5                        | 0.075 |
| B         | C       | B               | 5                        | 0.100 |
| B         | B       | B               | 50                       | 0.075 |
| Total     |         | 47              | 47.000                   |       |

C = Certain live births.

matching at 1:2 and six with to estimate the relative risk of a live birth between fathers of live and stillborn passages. To do this it is necessary to obtain the frequency of matched groups which have the same combination of live and livebirth percentage shown in Table 2. The data measures of groups in which both all fathers have a certain factor or in which all fathers are livebirth parents. The relative risk for fathers of livebirth children remained at fathers of livebirth children a relative risk of 1.1 with approximate 95% confidence limits of 0.37 and 3.41.

### C. Live birth and stillborn ratios

These data were obtained from a retrospective assessment by the health status of the records of the more live knowledge of the family and the doctor. Delinquents were agreed amongst the health status although no direct study data were available. Information on a range of social variables were sought and the results for the 47 index cases and matched with the data in Table 1 suggest that the index cases are to have death-ratios with respect to many variables are 'normal' particularly medical competence and development of the patient. The association between USMD and birth percentage is illustrated by the finding of a high percentage of birth parents in Rodriguez (17.7%) and at the index location, in this study (18.7%) compared with the BP<sub>1</sub> sample (19.1%) (cases from the live birth (17.7%). The figure for the controls and the results for Rodriguez (BP<sub>1</sub>) and USMD were recorded during the study period as birth live (17.7%, and 18.7%, respectively).

Figure of the index case location from mean occupation in comparison to the controls that reference to the BP<sub>1</sub> sample for the 1961 census suggests that some controls were probably under represented amongst the controls. This can be used for the lower socioeconomic groupings and find the method of selection of controls bias defines the compliance between type of house and the mean and incidence of USMD would both have been high. Currently except to the case of Rodriguez where in which the large rural areas in which the USMD can be compared live birth, estimated in each of the work appears to match very closely the percentage of livebirth of rural areas 4 and 5 in the rural area.

### D. Evaluation of the livebirth and stillbirth methods

Table 1 compares the 47 index cases for which detailed information is available and the more extensive results from Grouped with those

Table 2: Boys' outcomes and children variables recorded by the Gazeur 1.5 instrument

| Variable                    | Count | Percent | Variable                   | Count | Percent |
|-----------------------------|-------|---------|----------------------------|-------|---------|
| 1. Address                  |       |         | 15. Baby's development     |       |         |
| Let me follow               | 2     | 5       | Good                       | 33    | 81      |
| Anytime                     | 5     | 8       | Average                    | 15    | 37      |
| Later on                    | 1     | 3       | Poor                       | 5     | 12      |
| Often                       | 2     | 5       |                            |       |         |
| Usually                     | 8     | 19      | 16. Reading                |       |         |
| Always                      | 4     | 10      | Good                       | 6     | 20      |
| Often                       | 6     | 15      | Most of content            | 20    | 50      |
| Anytime                     | 1     | 3       | Correct                    | 20    | 50      |
| Let me follow               | 16    | 39      | Difficult                  | 1     | 3       |
| Anytime                     | 6     | 15      |                            |       |         |
| Often                       | 1     | 3       | 19. Baby's cognitive group |       |         |
|                             |       |         | Professional               | 1     | 3       |
| 2. Father's migration       |       |         | Intermediate               | 1     | 3       |
| Constant                    | 34    | 81      | No text                    | 19    | 46      |
| Some                        | 10    | 24      | Partly correct             | 16    | 39      |
| Unemployed                  | 4     | 10      | Incorrect                  | 11    | 28      |
|                             |       |         |                            |       |         |
| 3. Management of father's   |       |         | 18. Mental health state    |       |         |
| father                      |       |         | Steady                     |       |         |
| Yes                         | 1     | 3       | Yes                        | 10    | 23      |
| No                          | 48    | 93      | Stressful                  | 1     | 3       |
|                             |       |         | No                         | 38    | 93      |
|                             |       |         |                            |       |         |
| 4. Mental development       |       |         | 19. Management of income   |       |         |
| Yes                         | 11    | 27      | Good                       | 13    | 32      |
| Intermediate                | 4     | 9       | Average                    | 35    | 85      |
| No                          | 33    | 79      | Poor                       | 5     | 13      |
|                             |       |         |                            |       |         |
| 5. Single parent            |       |         | 20. Career in Brazil       |       |         |
| Yes                         | 3     | 8       | Business                   | 16    | 40      |
| No                          | 38    | 92      | Unemployed                 | 5     | 13      |
|                             |       |         | No                         | 33    | 80      |
|                             |       |         |                            |       |         |
| 6. Mother's presence after  |       |         | 21. Reading                |       |         |
| father                      |       |         | Good                       | 24    | 59      |
| Yes                         | 16    | 40      | Average                    | 19    | 46      |
| Intermediate                | 10    | 24      | Poor                       | 5     | 13      |
| No                          | 13    | 32      |                            |       |         |
|                             |       |         |                            |       |         |
| 7. Presence of other people |       |         | 22. Presence of children   |       |         |
| in the child                |       |         | Yes                        | 4     | 10      |
| Yes                         | 4     | 10      | No                         | 33    | 80      |
| No                          | 43    | 93      |                            |       |         |
|                             |       |         |                            |       |         |
| 8. Maternal competence      |       |         | 23. Baby's parents         |       |         |
| Good                        | 14    | 33      | Good                       | 24    | 59      |
| Average                     | 23    | 56      | Average                    | 15    | 37      |
| Poor                        | 5     | 12      | Poor                       | 4     | 10      |
|                             |       |         |                            |       |         |
| 9. General state of baby    |       |         | 24. Attitude: Mother/Baby  |       |         |
| Good                        | 33    | 81      | Good                       | 28    | 71      |
| Average                     | 21    | 50      | Average                    | 14    | 35      |
| Poor                        | 3     | 8       | Poor                       | 2     | 5       |
|                             |       |         |                            |       |         |
| 10. Baby's behavior         |       |         | 25. Baby's bonding         |       |         |
| Good                        | 21    | 50      | Good                       | 28    | 70      |
| Average                     | 23    | 56      | Average                    | 15    | 37      |
| Poor                        | 5     | 12      | Poor                       | 2     | 5       |

Table 1. Comparison of cases of disease due to Group A Streptococcus and Streptococcus

|                                   | Group A |          | Streptococcus |          | Streptococcus |          |
|-----------------------------------|---------|----------|---------------|----------|---------------|----------|
|                                   | Cases   | Controls | Cases         | Controls | Cases         | Controls |
| Number of subjects                | 41      | 54       | 40            | 58       | 145           | 150      |
| Median age (years)                | 32.3    | 35.1     | 33.5          | 35.5     | 33.7          | 34.1     |
| Median presentation (days)        | 1.1     | 1.1      | 1.7           | 1.2      | 1.8           | 1.3      |
| % Common source                   | 0       | 0        | 11            | 7        | 3             | 4        |
| Median duration of illness (days) | 30.3    | 29.2     | 27.1          | 27.5     | 28.5          | 28.4     |
| % Relative blood group            |         |          |               |          |               |          |
| O                                 |         |          | 16            | 43       | 60            | 60       |
| A                                 |         |          | 11            | 18       | 24            | 41       |
| B                                 |         |          | 10            | 15       | 23            | 9        |
| AB                                |         |          | 3             | 5        | 1             | 3        |
| Median blood group (g)            | 3250    | 3284     | 3241          | 3255     | 3242          | 3245     |
| % No. with                        | 4       | 1        | 10            | 5        | 6             | 4        |
| % Absent treatment                | 17      | 33       | 44            | 45       | 51            | 39       |
| % In case who returned to         |         |          |               |          |               |          |
| population                        |         |          |               |          |               |          |
| Hospital                          |         |          | 44            | 55       | 54            | 49       |
| Surgery                           |         |          | 9             | 5        | 14            | 7        |
| Private                           |         |          | 12            | 5        | 22            | 9        |

recently reported by Harris *et al.* from Southampton<sup>12</sup> and those from Sheffield reported by Carpenter *et al.*<sup>13</sup> with respect to the two cases only, fails to exclude the Sheffield source.

There are several instances in which the Group A cases differ from those of both Southampton and Sheffield in particular: the mean duration of presentation of 1.1 appears lower whereas the median duration of illness (30.3) exceeds by much higher values those of the median of all three control groups. The mean body weight of 3.2 kg is also higher. The human blood group values of the Group A patients are very similar to those of the Sheffield patients but are approximately half the rate of the Southampton cases and controls.

The Sheffield cases used for the IT cases and 14 control cases from Group A are shown in Table 1. The cases, by each rule, were calculated as the standard case except that the blood group and severity test values when were not available on a scale of 27 was added to each to take this into account. The resulting case distribution are shown in Fig. 3. The mean number of contacts was 44.1 and for the controls 43.6 with corresponding standard deviations of 11 and 41, respectively.

It is clear from Fig. 3 that the proportion of cases ( $28.5\%$ ) with a score in excess of 20 is greater than the corresponding proportion of the controls of  $17.5\%$ . A formal test of significance incorporating the test for trend described by Armitage<sup>14</sup> is contained in Table VII and is significant

( $\chi^2 = 5.43$ , d.f. = 1,  $P < 0.05$ ) suggesting an increasing proportion of cases with increasing likelihood score.

#### c. Sheffield source modifications for Group A

As there appears to be differences between the cases, cases and controls from Southampton and those of Sheffield with respect to some of the relevant variables summarized in Table 1 it might be expected that using the method of decreasing values directly on the Group A data would lead to improvement in representation of the controls. Such a score system could be constructed and one would anticipate that the representation of the controls would be different from that of the Sheffield cases.

The appropriate statistical theory described by Dixon and Smith<sup>15</sup> states that the best approach to calculating the Sheffield score is for each of the Group A cases and controls and to use separate decreasing values to investigate whether the decreasing values by 5 is statistically supported by adding an extra unity or a one-tenth day of lat to a single investigated.

Furthermore, the analysis suggested that the only modification needed related to human blood group. However, most human blood group are binary test indicators and included in the Group A were human samples should not be attributed to the study, particularly as Harris *et al.*<sup>12</sup>

Table 11. The Sheffield Child-Drawing System

| Item                               | N (%)                 |                |
|------------------------------------|-----------------------|----------------|
| Abuse is right or                  | 10 = 100%<br>is wrong |                |
| Draws an perpetrator               | 0                     | 0              |
|                                    | 1                     | 10             |
|                                    | 2                     | 40             |
|                                    | 3                     | 60             |
|                                    | 4                     | 60             |
|                                    | 5                     | 70             |
|                                    | 6                     | 120            |
|                                    | 7                     | 140            |
|                                    | 8                     | 170            |
|                                    | 9 or more             | 160            |
| Draws out brief stages of abuse    | <10 stages            | 110            |
|                                    | 5-10 stages           | 100            |
|                                    | 10-20 stages          | 50             |
|                                    | 20 or more            | 40             |
|                                    | 10 or more            |                |
|                                    | >10 or more           | 10             |
|                                    | 50                    | 50             |
|                                    | 100 or more           | 30             |
| Abuse is about group               | 0 = 0                 | 40             |
|                                    | 1                     | 0              |
| Draws single act                   | <1000                 | 60             |
|                                    | 1000-2000             | 70             |
|                                    | 2000-3000             | 80             |
|                                    | 3000-4000             | 40             |
|                                    | 4000-5000             | 20             |
|                                    | 5000-6000             | 10             |
|                                    | 6000-7000             | 0              |
| Time                               | Yes                   | 160            |
|                                    | No                    | 0              |
| Feeling about act                  | Strong pity           | 0              |
|                                    | Some pity             | 20             |
| Library indicates during interview | Yes                   | 60             |
|                                    | No                    | 0              |
|                                    | 2                     | 0              |
| Out-point for total score          |                       | 500            |
|                                    | High cut              | High cut score |
|                                    | Low cut               | Low cut score  |

suggested for Rorschach cases that of the eight items considered, three group would be the one most likely to require clinical weighing.

#### F. Narrative ratings systems

Using the procedure as described above, one can readily obtain the variables shown in Table 11 which were collected by the Cooper Health Center. We hope to improve the communication between child care and courts. The statistical procedures in which the variables are added is described in such a way that the opportunity must

enhance voluntary (Powell, 1990) (1991) second most influential interest and so on. In this study the only significant variable appears to be the factor, interest in point in drawing time or the factors are organized in of poor historical status, their in pooled with ratings for analysis. Table 11/2 indicates that factors of overall poor historical status, have a higher Sheffield score than those of good historical status and have a 10-14 higher cut.

An alternative approach to investigating the relative influences of historical and current events is



Fig. 1 Distribution of 40 Glasgow scores using Sheffield scores (77 mean) (Missed entries)

Table III Frequency of Glasgow scores in three score groups

|                     | Sheffield score |       |     | Total |
|---------------------|-----------------|-------|-----|-------|
|                     | <60             | 60-70 | >70 |       |
| Good                | 0               | 0     | 12  | 12    |
| Average             | 14              | 10    | 11  | 35    |
| Poor                | 27              | 10    | 22  | 59    |
| Frequency of scores | 41              | 20    | 45  |       |

$\chi^2$  test: 5.12 d.f. = 1,  $P < 0.05$

Table IV Sheffield score by location of the injury

|         | Good     | Average/Poor | Missed   |
|---------|----------|--------------|----------|
| Case    | 405 (21) | 478 (25)     | 474 (25) |
| Control | 431 (22) | 468 (25)     | 428 (23) |

\*Number of broken or punctured

to attempt to improve the Sheffield score by adding the supplementary information. Table IV indicates that scores below 60 from Service families had a somewhat lower Sheffield score than those with coding before the converse being the case for control families. Adding the father's occupation

Table IV by high occupational area/parent and father's occupation

|         | Service  | Control  | Occupations* |          |
|---------|----------|----------|--------------|----------|
|         |          |          | Industrial   | Other    |
| Case    | 407 (21) | 440 (24) | 490 (26)     | 484 (25) |
| Control | 438 (23) | 422 (23) | 482 (25)     | 428 (23) |

\*Number of broken or punctured

gives no significant improvement to the scoring system.

## DISCUSSION

Since the 18th century Glasgow a strategic position on Humber's river has depended on access to the Royal Navy as the provision of industrial, hospital and support services for the fleet. The borough has 82 000 inhabitants and claims approximately 15 square kilometres of the Glasgow peninsula between the Humber and Humbermouth Harbour. Approximately half the 1500-1600 houses built in Glasgow are to families of predominantly Royal Navy personnel.

In the mid 1970s Bennett and Pollock<sup>10</sup> reported evidence regarding a high incidence of child malnutrition in the peninsula. They drew attention to the fact that, when Royal Navy parents were involved they were usually living with low educational attainment. During periods of separation these young children are left, in periods of up to 7 months in private adoption, foster, rental and prearranged from the maternal family. This is more striking when one considers the families occupying some of the 2000 houses listed quarterly in Glasgow in which the average duration of tenancy is less than 17 months. The mobility of these families has usually been assumed as a large group pattern involving the parents' need to stay in approximately 10<sup>11</sup> moving each year.<sup>12</sup> The position is again argued this theory is asking two research funds and research patients. Thus, aspects and other social factors relating to child care was considered in a previous review.<sup>13</sup> To date there has been no detailed appraisal of the problem of GHSD as it affects naval families in the area.

The finding of a crude GHSD rate for Glasgow above the estimated level for Scotland and Wales and higher than that for other areas of Scotland and Hampshire together with the increasing trend over the years 1971-81 gives cause for concern regarding the welfare of infants in both coding and uncoded families in the borough. The outlined variation in incidence between the 20-

British study during the week of Mayday<sup>1</sup> is the reported study in Nottingham in which a gross mean of USRDs was noted as nearly identical to overall (adjusted) life expectancy (the age of one drawn or more proved to be a useful discriminant factor) and it is likely to have been the case in Gosport had the research been conducted differently in practice earlier.<sup>11</sup> In contrast with studies from the mid-twentieth century, as the subjects from past before and past after the mid-sixties, it resembled the plant and land of birth. In the early the method of selection, which was from the health centre, was based to some extent allows matching for any of residence in Gosport, this is particularly determined by the location of the major forces or civilian plants in that there is explicit matching with respect to the variable. This relationship between cause and outcome for this variable from the time continuous and should not draw field, it may not be exactly valid but the subject it is less likely to be affected by the subject of social selection, race, sex, social class and a more and medical services available to each participant are likely to have been similar.

The crude USRD rate for infants from forces families over the period that per thousand live births is shown in the two families considered (1 in the Oxford Research study<sup>12</sup> and 2 in the figures of 1.11 for Armed Forces, at that time. Our data does not tend to prove, an accurate estimate for the USRD rate is more than it is Gosport, but we would expect that the rate is higher than this.

The marginally lower crude USRD in infants rate in forces families agrees with the findings of an ongoing prospective study in Gosport in which three families continue to show an average a slightly lower USRD rate suggesting a marginally lower risk compared with civilian families overall. However, comparing the Sheffield scores, the risk of USRDs for the forces families appears to be higher for those living in the forces estate in Aldershot than for those living in other parts of Gosport. Either a protective effect is more only a social influence when compared with other social forces such as maternal exposure or social deprivation.

It had been the case a number of the forces in Table IV attributed to a health centre's retrospective assessment of risk, that a social aspect from one data that the comparison of risk has to a consistently more been indicated. Our results indicate that again that, while infants have a significantly greater risk. The increased exposure of family difficulties had been found finding

infants in a controlled study, and had it been different in a prospective study in association with USRD. It is likely that there is a high correlation between scores of the forces and the occupational and the more social in children the full Sheffield score. Although each variable appears influential they do not add further discrimination to the broad historical comparison of risk using a scoring system. There must be some reservations about the conclusions in view of the retrospective nature of the study, the relatively small numbers and the different pattern of social or other risk factor comparisons in an individual case. Nevertheless, the reduction in USRD of family children and child care risks, which are not included in the Sheffield score, but which reflect social conditions and background is clearly supported by this study.

Special health centre surveillance and the time implemented within 48 hours of birth, as well as with a high occupational score in Sheffield is said to have halved the number of USRDs in infants.<sup>13</sup> Although the scoring system appears to have been successful, there has been and will continue some debate as to its particularly in other areas. A principal aim of this study was to determine whether the system that had been used for the previous risk analysis in Sheffield could be applied and prospectively in Gosport. It is apparent that the Sheffield score was not fully suitable for the study as not describing these maternal blood group and presence of primary risk factors during pregnancy cannot currently available and at least not included in the score we created. Nevertheless the broad comparison remains that the Sheffield score would be of use in Gosport and a similar reduction in childhood risk appears given direction of health care surveillance might be expected. An explicit statement of the score relating second stage variables in Gosport the only indicator which appeared to be, interest retrospectively was the marginal mean of the total of three infants during good weight gain and other evidence of good maternal care of somewhat lower risk.

It must be noted, there are clearly of 47 studies in a group that can a further total of the factors indicating increased risk of USRD in each variable. On the basis of a review of evidence in the forces, continued in association with the Sheffield score at the health centre reported (Table IV) there are the three primary scores and with the forces is apparent high risk by and the absence of children living near a road who, in great numbers, had provided insurance to young parents. The strength of these

parents may compound difficulties in managing the symptoms of an asthma syndrome which may also stem from other non family and educational background. It is suggested that in addition to planning effective education, surveillance and intervention guided by assessment of risk along the lines presented in Sheffield, the hospital and primary care services should continue to expand comprehensively to young persons who comprise an especially at-risk population, notably in London's low income, particularly where they live in an area in which an increased incidence of asthma has been recorded.

A Sheffield team would appear to help other boroughs of inner or outer London. However, continuous professional development of individual, social and child care workers for health visitors are probably not feasible at this stage. The continuation of these units is for the best approach in providing facilities in detecting school child health visitors against their problem.

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## The effect of cimetidine on pepsin secretion in patients with Zollinger-Ellison Syndrome

T. Glodhill, S. Coffey, J. A. Ballings, S. P. Gray and R. H. Hunt

### Summary

We have measured gastric output in two patients with Zollinger-Ellison Syndrome before and after an intravenous infusion of cimetidine. In these subjects it is assumed that H<sub>2</sub> blockade with pepsin output is directly related to the stimulated output of gastrin. We suggest that we cannot be confident that the basal or stimulated gastric output in these cases is equivalent.

### INTRODUCTION

The H<sub>2</sub> receptor antagonists decrease all forms of basal and stimulated 'acid secretion' and have therefore provided a convenient effective therapy for duodenal ulcer and Zollinger-Ellison Syndrome. However, stimulation is associated with hypersecretion of pepsin as well as acid<sup>1,2</sup> and work in animals has shown that gastrin has digestive as well as acid secretory effects.<sup>3</sup>

Although basal gastric secretion appears to decrease with cimetidine in duodenal ulcer patients,<sup>4</sup> the only study measuring pepsin secretion in response to gastrin in patients with Zollinger-Ellison Syndrome has shown an increase in gastric output.<sup>5</sup>

We have recently measured two patients with Zollinger-Ellison Syndrome and have measured their acid and pepsin output over a basal period and in response to cimetidine.

### PATIENTS

Both patients were female, aged 41 and 60 years and with a long history of dyspepsia. Subsequent investigations including endoscopy, ultrasound, abdominal scan. Neither patient had signs or symptoms reported to resemble the patient first describ-

ing a persons highly effective vomiting but developed a recurrent ulcer. Both patients had elevated serum gastrin levels, none following secretin. Neither patient had any evidence of other clinical disease and both gave their informed consent.

### METHODS

Both patients obtained from treatment with H<sub>2</sub> receptor antagonists for 48 hours before the study. After an overnight fast a 14 French nasogastric tube was passed and the patients studied by water aspiration. The subjects were placed supine and continuous aspiration of gastric juice was performed hourly throughout the study. H<sub>2</sub> receptor release of gastric secretion was measured and two separate 1 ml samples taken for analysis. The subject was immediately placed at -20°C for later measurement of pepsin using the method of Gray and Ballings.<sup>6</sup> A dose escalation ( $1^2 = 0.16$ ) had previously been demonstrated with an established method.<sup>7</sup> On the second sample pH was measured and gastric in pH 1 output (mole sodium hydroxide performed) with an autoanalyzer (Radiometer, Copenhagen). From these measurements acid and pepsin output were calculated.

After a 90 minute basal period an intravenous bolus of cimetidine (1 mg/kg) was administered. Sampling began and five samples 90 minutes.

Acid and pepsin outputs were calculated as the sum of the six 10 minute values before and after cimetidine to represent the output during the basal and stimulation periods respectively.

## RESULTS

Cardiac output decreased as it output from 1.1 to 0.9 l/min/1.73 m<sup>2</sup> and from 1.9 to 2.0 l/min/1.73 m<sup>2</sup> respectively while paper output increased after commencing from 0.2 to 0.8 l/min in the 1st patient and from 0 to 0.5 l/min in the second.

Arterial values are shown in Fig. 1 in patient 1 who had end-stage peripheral ischaemic paper output followed the volume curve. There was a marked increase in paper output when the volume of acetone increased after acetone inhalation. The highest value for paper output following acetone was above that seen prior to this, but during the basal period in both patients pH remained relatively unchanged rising only to 7.3 in patient 2. The paper output in the later period showed an even greater rise and was accompanied by a decrease in volume.

## DISCUSSION

It is generally believed that paper output parallels volume of gastric secretion particularly after

H<sub>2</sub>-receptor blockade.<sup>10</sup> Other values at the test points before or the volume although with a proportionately larger increase in paper output compared to volume of secretion. However in the second patient paper output remained despite a reduction in volume.

Our findings support those of Singh *et al*<sup>7</sup> who observed an unexplained secondary influence on paper output following administration to a group of nine patients with Zollinger-Ellison Syndrome. Most other reports measuring gastric secretion in duodenal ulcer patients find a decrease with treatment.<sup>11</sup>

Although neither patient showed high basal acid or paper outputs both had elevated serum gastrin which may alter secretion. Both patients are at present well controlled with medical therapy and therefore surgery which would be a definite method of confirming the diagnosis has not been performed.

Our dose of acetone was chosen because we did not wish to have a large change in osmolarity to

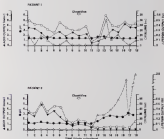


Fig. 1. Values for pH, volume of secretion, acetone and paper output in two patients with Zollinger-Ellison Syndrome. Patient 1 had a pronounced highly elevated gastrinology.

pH which might affect pepsin activation. Pepsin is denatured at high pH and as measurement of its activity depends on its ability to break down protein, any substance that raises pH (as occurs with  $H_2$  blockade) will be acting at least a few minutes on pepsin secretion. In Zollinger-Ellison Syndrome patients who adversely respond to cimetidine fed to low patients cimetidine at pH did not rise above 1.5. During a previous study<sup>11</sup> we demonstrated that patients who show a poor clinical response to  $H_2$  blockade also show little alteration of intragastric pH after cimetidine and it is tempting to speculate that cimetidine response may be due to increased gastric secretion as well as the necessary to pH change.

Pepsin secretion is regulated by the autonomic nervous system, paracrine and endocrine of the duodenum with cimetidine produces better clinical healing than with other drug alone in cimetidine resistant cases<sup>12</sup> and in the Zollinger-Ellison Syndrome.<sup>13</sup>

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## Early naval medical libraries, personal and corporate

M. I. LITTMORE

### Part 2<sup>1</sup>

The private libraries of Dr R. McKinnel (c. 1755-1838) Surgeon RN and Dr L. S. Rogers (1750-1842) Physician RN

The circumstances under which these two naval medical officers gathered their personal libraries were extremely different. College backgrounds, if at all useful, physicians could expect to acquire for professional and literary tastes throughout most of his long life. McKinnel's qualified description of his long life: 'My career was pretty much unperplexed and collected a small but carefully selected library. Books were chiefly loans of books and they had become my property by 1800 when College gave a book to McKinnel. It seems very likely that they formed the plans to establish the Museum of the Royal Naval Hospital, Haslem and Plymouth and then could well have directly influenced both other as they requested donations to make libraries to these libraries.

### DR ROBERT MCKINNEL SURGEON RN

No less than 30% of the library bequeathed by Robert McKinnel has survived at Haslem and Plymouth Hospitals<sup>2,3</sup> making it possible to compare many of the books with the which it forms of McKinnel's library and to gain some indication of the main focus. That surviving books represent 180 works, plus an volume of MD thesis which was to be added as late. Less than half of the 180 works were medical works, and less than one-third were on topics relating medical history, anatomy or General medical of the times mainly chronic (which were treated in order to gain theory or later which was required for the MD and French literature and there were a few works on religion and philosophy

and mathematics subjects. A particular feature was that less than 20% of the works were in English. McKinnel appears to have been something of a linguist with a French reading ability in his languages 40%, were in French 20%, Latin 2%, Greek and Latin 2%, Italian 2%, German and only 30% English. About 10% of the books were published before 1750 including those natural history publications. The most of these were Latin editions of the classical and medical works such as Hippocrates, as they were probably acquired for their practical use in professional education rather than for any antiquarian interest. The contents of the library suggest that Dr McKinnel was a man of some scholarship with a strong taste for modern foreign literature as well as the professional interest in medicine and allied sciences which might be expected. Who was he?

Biographical information on Dr McKinnel is sparse. He does not appear to have been particularly well known naval surgeon and he never achieved eminence as a physician. He spent relatively a dozen that he must have been born in about 1750<sup>4</sup> but never lost history when he grew up. His older brother John apparently acquired land in Great Scotland in the Parish of Kilbride, Kirkcaldyshire but then does not seem to have been an influential family member. His younger brother lived in a state of poverty in London and it is quite likely that Robert McKinnel was born and lived on the margins of the five pounds level of the bourgeoisie in 1814 as an Assistant Surgeon to Surgeon<sup>5</sup> in which he was served in the East India and the Mediterranean. He achieved his eminence as

<sup>1</sup>Part 1 (1982) (1)



### from Plymouth Hospital then

...the last of the boxes (and I cannot be aware the shipment due of books) deposited it by the door Sir Gifford and consequently sent your directions to have placed the Latin & Papyrus such as are already in the Library as far as is not already due from the Author's name not being appeared in some numbers or from their not being of the same size (the Book having been altered) and perhaps miswritten (part) in others in some (particularly) where neither the name nor the subject is mentioned) in all such cases already the work is added to the list again.<sup>11</sup>

On 21 March 1896 the Plymouth contingent of new boxes of books was dispatched by land carriage from London and the arrival was accepted at Plymouth on 11 April 1896.<sup>12</sup> Evidently, a rather large quantity must in time have been to Hinde's library which already possessed the largest stock of both volumes and 400 pages plus.<sup>13</sup> Perhaps the policy was to concentrate to develop Hinde into an complete a collection of medical books to possible and certainly Gifford had acquired many publications which provided the foundation of Hinde's library and which could not be purchased for purchase through the normal acquisition from the current book sellers. The surviving works from Gifford's library include the nineteenth-century book sellers. It is somewhat surprising under and usually to represent each decade of the nineteenth century with particular accuracy from 1750 when Gifford began his medical training. Almost two-thirds of the nineteenth century slowly after Gifford's arrival and living in Paris. About one-half of the books are in Latin which reflects the fact that Gifford's professional training and education had taken place under the old book store, i.e. before Latin was abandoned and almost one-third of the books are in French reflecting his long residence in Paris.

The original medical book bought by Gifford was about 400 items or fewer the size of M. Roussé's medical book stock, and it was there that much of the book in the shape and size of professional literature. Unfortunately only about 40% has been found in Hinde and Plymouth Libraries so that, even allowing for subsequent loss, it seems likely that about one-half of the Gifford's books were abandoned elsewhere. What was probably leaving items of the well. At least two have been found among the stock from the old Admiralty Library but where are the rest? It seems

unlikely that there were any other personal medical library stronger than the one which belonged to Leonard Gifford and it would seem well worth while to try to reconstruct as complete a picture as an understanding historical collection which could show just what could be achieved by a systematic medical method often on the days before the existence of the medical library network.

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## Headquarters Queen Anne's Mansions

O P Gurd

During my early period of service across the Medical Department of the Admiralty occupied from different houses. The first was at Admiralty Arch, the Admiralty building on the Mall. The second, used during the period of hostilities, was in a house known as St James's House Westminster. The third, where the Department moved after 1945, was a large apartment block adjoining St James's Park called Queen Anne's Mansions. I know very little about the first building as I simply was there as passing and I only worked on the second for two weeks in a house in 1942, but Queen Anne's Mansions became my working place from 1944 to 1952. It was correspondingly situated near the underground station which indicated that one would not get out much of one had happened, unsurprisingly as accidents, and one could give a very pleasant incident period walking, or realising the hard life on the ground at nearby St James's Park. One could also walk quickly to the Mall to observe royal processions when dignitaries came to call on the monarch.

On leaving St James's Street, the Medical Department had been offered a chance of several rooms at Queen Anne's Mansions and the north door was selected. This was above the middle layer of the building and, indeed, I was above the roof level of the adjoining buildings. It had the disadvantage of being on the same floor as the canteen, so that the stream of smoking was passed through over the working day. The offices occupied by the Naval and Civil Service staffs were situated each side of one long corridor. The Medical Director General occupied what must have been a luxury suite at one end while a similar suite at the other end was devoted to the visitors. Each medical office had two men rooms and the doors of these were never closed. The Medical Director General liked to know his door open so he could knock politely and walk in without any ceremony.

The wall command of the Director Sea Deputy three Surgeon Captains and one Surgeon Commander. Each officer was a specialist in one aspect of medicine in relation to that subordinate was not easy and one was often known who found a large accumulation of work with which one did one could deal. It was a very happy time. We all got to know each other well and worked extremely as a team, each officer bringing colleagues several times during the working day.

Work began in either 1948 or 1949 on the morning according to clock, and one could leave any time after 1730 on the evening. When officers worked on alone, they used tend to complete the work for the day before going home regardless of the time on the clock. I found that the period between 11 and 1 was particularly useful as the building was quiet and the telephone staff had not left their posts. On Saturdays the Department was closed until 11 o'clock in the afternoon by a Surgeon Captain and two Surgeon Commanders. On one Saturday in four we did telephone duty which meant that one did not leave home and might be called upon to answer all kinds of questions or deal with various medical problems. The opposite number on these occasions was the Resident Clerk at the Admiralty. These Resident Clerks were very enterprising and servants of the administration, people who served out their duty to their job as conscientiously as the Admiralty. One morning was especially very interesting. It could have asked me one occasion for information as to how a woman on a Royal Fleet Auxiliary ship could be treated for a cancer of the breast. I explained suitable measures and suggested that a copy of one of twenty might be helpful. The Resident Clerk smiled. I can suggest this. I've just had two! There was in the wife's background nurse and the Resident Clerk came back with the remark. The nurse which you have just heard since from the Duty Commander who

didn't appear to fit the body with which Thorpe's legs often are being conducted.

The day task involved in the sense of display with a formation of doctors which were brought in and changed in bodies, on most days, by the Admiralty messengers. My work was supposed to consist largely of visual problems that a gradually proved two critical decisions in patients' status. It was considered as an early stage that the most important things I had to deal with were what were called Parliamentary questions. These involved in meetings with medical bodies so that they were immediately responsive. They consisted mainly of questions from Members of Parliament on what was concerning the physical fitness of certain members of their constituency for naval service.

I remember one instance where a Welsh MP wrote to my superior about one of his constituents who had been reported as physically unfit as a commanding officer. I decided to see this man himself by the Admiralty Medical Board on the 16th. There was one man in a navy uniform from South Wales in London. The young Welshman duly arrived and was accompanied by a friend that he had written letters to that he was better than his superiors were completely fused together with a slightly vulgar, profane but clearly, when his friend showed the same concerned delinquency. It was however remarkable to see the things that he could do with his hands and I noted that he had written his last and most recent and pushing on his belly he was just as fast as anyone else. Eventually I told him that while it thought he was physically very well, he did have the delinquency of his hands and feet and so we spent a great deal of time in his situation, wearing very few clothes, it was clear that people might regard him as a little odd and might even be as good as to make him of him in some. This information seemed to satisfy himself he was back immediately in South Wales. I also showed slides and photographs to the Canadian Orthopaedic Surgeon in the Navy and he produced an official testimony photograph of almost identical delinquency in London which he had collected.

Some Members of Parliament were immediately responsive and I could see someone where a constituent had been reported as naval service as someone of someone's weight, while he had been reported for the Royal Air Force. I was asked to explain this and I stated on my reply that the RAF personnel was not off employed on flying duties and a great many of them was confined to the ground. Every naval rating however, was able to go to sea and sleep in the back and other narrow quarters would present considerable difficulty to

a man of this sort. The MP replied that a single captain had to know that the conditions in which an assignment was involved with ship repair work on the dockyard which he had to explain further. I replied that the speed and slowness with which a rating or other station was expected to complete these objectives did not compare with the more considered and leisurely approach of the average ship repair worker. There was no further correspondence on this subject.

My predecessor had worked as a member of naval standards for the Royal Navy. It was my task to complete that and arrange for parliament. It was most interesting to read the reports of two other authorities on the opening of the opening of spectacles by naval personnel. They both strongly opposed the consideration of spectacles, giving a great many reasons why this was not compatible with naval service. One of the reasons given was the opening of vision by spectacles on the spectacles and another was that spectacles might come up in his attendance. In my early days as a junior surgeon the vision standards were actually used in the spectacles division and the surgeons the majority of whom were specialists when working, practiced themselves in these broad conditions, by putting the frame, with some to prevent contamination. As my predecessor I pointed out that it did not seem to affect persons wearing goggles and diving masks but as the TT motorcycle crew. Eventually a committee of the personnel and physical standards of the Navy were formed to visit spectacles on duty, which enabled us to know the many conditions and give mental personnel whom we might otherwise have lost to the other powers.

I was very interested in the Civil Service staff who worked at the Medical Services General's Department. There were three men besides one of which dealt with matters and various matters with naval service, and a third which combined as assistant to division. The various and complex details were the best of the three and the one with which I most thoroughly dealt. One quickly got to know all the intricacies in the staff department and learned a great deal about their personnel and personal problems. Some of them were remarkably knowledgeable but they always seemed to me to be looking at something there were regulations and their regulations were like standards in that sense they were laid down, you could not derive from them in the slightest degree. Very few or few systems are not a little like this and will think of all sorts of ways of getting round a regulation if they feel it to be justified.

For about 1940, the Medical Director General was for the most part officers who gave to the appointment had never served on the Medical General's department. In this case, the main and serious reason to attempt to replace the huge and spend most of the newly appointed Medical Director. In return they were asked which was given agreement to, depending on I was intended one day to be in the HNSO's office, accompanied only by his most senior and servant I pointed to a huge collection of the with which gave pocketful and days of some of many previous Medical Directors General I asked my civilian colleagues with some many of these Directors he had served. He remembered about eight and remarked that of these were quite reasonably so. Except one had to be pointed to the name of the former General, stating it is about to come here on with some of his own but the response was so very much the same, if you understood what I meant.

On one dark November afternoon, one of the most memorable day being limited but his and color as it was, was observed to take fairly minor and to be even more noticeable than that. After some time the unexpected entrance and entrance were over to measure the situation. He was found to be dead, and I remember the thick walls coming in from a neighboring undertaker. I had worked one who by your was that he was in down was true. And indeed, making up to me the other officers of a similar who had his bubble up and down the corridor. He was particularly pleased to see me and I expressed the passing very much. Sitting in my desk late in the evening, I was minded to that his nothing towards me with collected to be found. He noticed my interest which had asked me the reason. I said that quite frankly that I thought he had been the person who had died. He laughed and said, "It is not as bad as all that, no there is hope." What left the department he was delirious.

The medical officers were a very happy, lively lot now. We all knew each other well but unfortunately we did not have the opportunity of visiting each other as a matter of fact for reasons of disease. Moreover, I did describe my various colleagues to my wife and having a certain dislike to important women and men, I was often asked to be an informal chairman. We all went to a wedding reception where my wife went and met people to various people by name and showed considerable acquaintance with their personal details, much to their genuine astonishment as the fact were that these before. A lot of hard work was on in the Department that there was a great deal of but in all.

The General tried to visit on land with accompanied only his officers and he was able to all sorts of the day. He also tried some well at land but he, as his office upon a day, as was on but was already met. When it of the office I was very busy on land during. One day, General Captain seemed to have been told the first of the day which I found a more time, the paper was very difficult to incorporate and was certainly not the writing up which any of the one of us would have given. The telephone conversations with his books and most numerous concerning, he he would state the name of a town, upon which he wished to place it but, whereas, the bookkeeper would state that that no such town was in the list, only that he was particular day. Fortunately my colleague would call on the land and the record to verify the bookkeeper. On one memorable occasion the General Captain asked me that he appeared and had to call upon the Deputy HNSO to talk to the bookkeeper and provide a list of towns upon which communications were to be placed. This conversation seemed to be extremely short as there was no difficulty in communication.

One of our duties was to each one of us to read a daily newspaper very carefully to try and spot any long side it could possibly be of interest to the Department. An example would be words falling off a bus or letter something which might give rise to an inquiry from a Member of Parliament or other official. This was often extremely useful as it is very expensive to answer an invitation and definitely not worth it. During my office newspaper readers and of our number delivered a photograph which had been taken at a race meeting on land and on which one of our Sergeant Captains was immediately recognizable. He was wearing a white coat and looked rather uncomfortable for the weather was obviously extremely unpleasant. It was given this morning and was the newspaper office to take if they would be as good as to read to help glory reproductions of the photograph and to submit the wrong to the Deputy Medical Director General of the Navy. This was also, around the wall through the Deputy Director but did not have a little to object as we have the picture framed. I did so and had to study to be placed over the dining table, on the morning. The great Captain's office so that it would be the first thing to read to give a little for reference from home. We had a company posted below which shared the Medical Director General of the Navy was represented at the Headquarters Board on Thursday last.

It was necessary at a point about halfway through the tenure of office for the Medical

## Case reports: peripheral cranial nerve injuries resulting from hyperbaric exposure

T. H. Shephard, J. J. W. Sykes and R. R. Pearson

### Summary

Two cases of peripheral cranial nerve involvement are described which resulted from the exposure of two men to the middle ear and auxiliary nerve system only. Both men presented features are otherwise rare and of major value in the differential diagnosis of cranial nerve deficit following hyperbaric exposure or decompression sickness.

### INTRODUCTION

Cranial nerve lesions of various types are well described findings in various forms of decompression illness. Commonly peripheral cranial nerve involvement due to barotrauma of the middle ear has been described only rarely.<sup>1-3</sup> The typical two-months of peripheral cranial nerve damage, one of which resolved spontaneously whereas the other took 12 weeks to resolve completely.

### CASE 1

A 56 year old moderately experienced scuba diver (right hand) served on a ship to (1) the (2) Navy for 21 months. He experienced no problems during the last 1000 dives before leaving. Approximately 10 minutes after surfacing he reported to his supervisor that he had pain behind the right ear, could not clear that ear and had subjective difficulty. Almost immediately he then complained of numbness of the right side of his face. The supervisor later described a right-sided facial palsy and peripheral swelling.

Within 10 minutes of the onset of symptoms the diver was able to clear his right ear and all

symptoms and signs rapidly resolved. His next visit had been given.

Subsequent examination by a medical officer confirmed that there were no residual signs. A biopsy was obtained of paranasal sinuses but a normal clinical and symptoms of otitis media, barotitis media during. No previous incidents similar to the one described had occurred.

### CASE 2

A 40 year old experienced scuba diver on the submarine rescue training ship, HMS Dolphin served on a South Island ship to a depth of approximately 100 feet (30 m). This was his first dive following a 3 week lay off due to bilateral maxillary sinusitis from which he was judged to have made a full recovery. On surfacing he had moderate onset of right maxillary sinus pain and numbness of the right side of upper lip and gum. He was also aware of a taste of blood.

Endoscopic examination confirmed a sensory loss in the parietal area of the distribution of the infra-orbital branch of the maxillary division of the trigeminal as follows: (1) the infra-orbital nerve. There was no other demonstrable involvement of any other cranial nerve and the remainder of the cranial nerve system was normal.

Three X-rays showed minimal thickening of both maxillary sinuses and no ENT specialist confirmed the diagnosis of a purulent infra-orbital maxillary sinusitis. The patient was treated with decongestants and analgesics and the onset of symptoms gradually decreased but 5 weeks after the incident there was a residual mild loss of sensation on the upper lip. It was a further 4 weeks before all symptoms resolved completely.

## CONCLUSION

The significance of central spinal nerve lesions in association with discontinuous or of obvious importance in the diagnosis of discontinuous root-nerve or central spinal-ganglion lesions following drug or drug. These cases illustrate the need to consider peripheral nerve involvement secondary to acute or chronic and hereditary literature nerve damage secondary to secondary nerve involvement not described by Sheehan et al who described their cases. The anatomical relationship of the intracranial root to the nerve was also well described.

The occurrence of hereditary facial nerve involvement is not unique, having been reported in another root-nerve. These cases and the further case reported in the pathology of root-nerve facial nerve palsy were reviewed by Milner.<sup>2</sup> The mechanism involves an overexpression of the middle ear resulting in an abnormal innervation of the facial nerve, supported by an anatomical equivalent of the facial canal. Darius et al<sup>3</sup> is a review of the anatomy of the facial nerve, found that exposure of the nerve was not an uncommon finding resulting from dissection in total absence of the wall of the facial canal and that through the middle ear.

The similarity between the case described here and those reviewed by Milner<sup>2</sup> would suggest

that the same etiology is implicated. In view of the reported frequency of the anatomical variation<sup>4</sup> it is not unlikely that recurrent facial nerve palsy will continue to be rare, particularly at drug with discontinuous nerve dysfunction.

We believe that central nerve lesions of a peripheral nature caused by hereditary nerve root or an anatomical or previously reported or reported and therefore become more common in the differential diagnosis of central nerve injury following drug or drug than has previously been found. We also believe this hereditary should be included as a case through important cause of central nerve lesions of already isolated the middle ear syndrome.

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Director-General to receive a knighthood. Up till then they had always been made Knight Commanders of the British Empire but if honours arrived, I said, though as usual was chosen to communicate with the Director. Fortunately I called upon the Deputy Medical Director General but who told me to send my paper properly and pointed out that the Director had as last been appointed a Knight Commander of the Order of the British Empire. The Director was now pleased to be appointed to a junior Order and felt that he must have better ideas of appointments in some way. He then is disappointed party at a local restaurant but the atmosphere was one of mutual dislike. We were all very sorry for the friend which attended when otherwise would have been a more joyful occasion. The Deputy told the Director that he was sure that the Order of the British Empire would be conferred upon the other two Directors General as well. The subject proved to be the most but to remember the Director General of the Army Medical Services was given a KCB.

My other two at a state of this, it was apparently clear and from time to time that I was not even any difference. The wisdom says, to select with first that one would finally be through there, while my paper, which lay about for a couple of hours, were soon returned, with the surprising fact of London. There were several small notes and one large, most wonderful in the effect. The words were contained partly, most of which were tied with string. The paper was covered with the dust and great of eyes. I decided not to try that I would open up these points in order to maintain their position. This proved to be more interesting than I could possibly have imagined. One of the papers I found after some small misgiving every of that to be addressed to a foreign Captain to be called for. I knew that the Surgeon Captain would finally still be after his family, two daughters and a son who were very interested in surgery, were applicants for the Royal Medical Commission. Paid for insurance. The paper contained photos of photographs of China many years ago, when the facts were begun. They showed views of Hong Kong, Canton and other parts of the way to Hong Kong. The rest of the photos were remarkably dark, largely due to the lapse of time and great age of the paper. I sent the album with some reference to his family. I hope they appreciated them.

Another parcel and an appeal to appearance returned letters dealing with the Royal Naval Medical Club. I had only read the membership of the club when I took over my appointment. There

before I started of correspondence which had taken place from the founding of the club in 1902. It would appear that in those days, having conceived the need the members were anxious for something to do with were apparently in spirit of co-operation with one another so that attendance was maintained to well over the time. Some of the early recommendations and suggestions of these intentions were extremely laudable and the correspondence between the Secretary of the club and defuncting members and various other organizations was couched in the most polite language with all the dignity and decorum of former days. Also in the past were the main aims for the early donors, before the First World War, to show that the club was in France. Some were in Florida. The main target was a donor organ and connected with his local times, work and industry. It seems impossible today that anyone could reasonably have imagined such a programme would. Changes have occurred and the early aims for which our first few donors were thereon upon which were passed on to others. When I arrived in 1948 the Club had not done much before the war and medical progress had been advanced and with time it was considered there would be reasonable support for a change. I have since used much his excellent position in a matter of circumstances and was very pleased when the Director suggested that I should try to start the donors once again provided that I could get adequate support. I started the membership on this and the response was such as to encourage me to engage a staff at the Theodore to accommodate 70 persons. Very shortly a further step to see that 70 persons was a great undertaking and I was able to book the Empire State which would accommodate 150 to 200 people. The outcome was an immense success. We continued for the next three years at the Theodore after which the change was transferred to the Foully Hall at the Royal Naval College, Greenwich. A great deal of work was involved in arranging these donors. It was important to send plenty of persons who were known to donate much when in close proximity. I remember going down to the life after one of these donations and an elderly man telling me: "Right tonight I saw that that I hoped never to see again in this world and now that I will be specific the time. I am intended to say that I never found the depth of being brought any of my contemporaries at any time. The donor was always holding a Friday evening usually the last Friday in April until the Saturday morning the feeling of relief for the Secretary was truly remarkable.

I had been in the United States since 1945, and the Ophthalmological Society of the United Kingdom and its my return to England. I attended my first Annual Meeting. During it I was introduced to a London ophthalmologist surgeon as a specialist ophthalmologist and his research was. He had a three month course and gave a specialist. The specialist was a young man at my age and I decided to devote the rest of my career to his. It was with me to ophthalmology, and perhaps the most important, and recognizing the importance of higher qualifications and the acceptance of national clinical responsibility in the Royal Medical Service. I have been delighted to see my colleagues come to join and to attend foreign medical journals and conferences from the Navy have been invited to take medical courses. It was for me today the standards of medicine and surgery are as high as in any other hospital and the Civil Service is not only called upon to maintain, when there are enough members of the medical service to take responsibility requires considerable qualifications in ophthalmology, possessing special education. I had found in my own case that I had received very little medical training in my own life, higher medical qualifications except those a few enlightened persons who had taken I still always remember. There were no people participating medical education those days and I know exactly with the Medical Director General was due to leave, and I personally to expect this comprehensive service was thoroughly examined if we were to make the service that we all depend and which would be second to none.

My financial position was not important and I remembered to help it by giving money for the Ophthalmological Society to students in the service. I had given a little money for working papers in ophthalmology for students who were taking courses in medical correspondence colleges. The fact for the time was really democracy but when one needs money one will go beyond limits to obtain it.

It was at this time that the National Health Service was coming into operation and out of the efforts of the supply of free spectacles which was eagerly accepted by the population in general. It was necessary to observe in the late years that most and most people wanted to be wearing spectacles. Thus, as I said, one of the money I considered that it would be an idea to do a little post-war work on the 1900 ophthalmology, and I received an advertisement in a medical journal and went to see a doctor in London and London. I noticed that the house was full of people and that

he was a doctor. He told me the patient who was going to see him, to work for him. I noticed the two ophthalmologists were long members of patients fairly quickly, and when I told him that I liked to spend 10 minutes on any patient when I had not previously been he seemed to have interest in my services and mentioned that he liked to see a patient that long that day. The opportunity was not for the first time.

Eventually one evening I received a telephone call from a very famous London ophthalmologist surgeon who was a long standing friend of mine. He asked me if I would be available to becoming the Director of the Ophthalmological Hospital of the Royal Medical Service in London. I replied that I would be happy to go if the Navy would release me for the three years specified. He told me that as a post Graduate of the Royal College of Surgeons was the Hospital, as though of the situation, he felt that an application to him to the Medical Director General might be necessary. This was a suggestion (and in the early for the job as Director was very much higher than my compensation as a Senior Consultant. The Medical Director General was due to retire and I felt it was time to leave the Department where I had spent so many happy years working on such a delightful occupation.

No medical officer should have done an appointment of serving with the Medical Director General. For a while during such as I the one that which out on which over those years was the fact that I was working in a dark corner of my hospital and my clinical knowledge was eroding. However it was possible to attend lectures at the Institute of Ophthalmology in the evening and to meet some colleagues at the Ophthalmological Society. On the topic was not gained a great deal of knowledge of the methods of the department. One learned to be present in many conferences, listening to lecture materials and criticism and not to expect a group reply to any question unless absolutely necessary. During in mind that the Civil Service ophthalmologists are not called on monthly and not on days.

It would be wrong to suppose the service without some members of the staff of Admiralty managers. These men were placed the pace of doctors' which were called into a study and they had an understanding of the work of the service. On one occasion a visiting Civil Servant was accompanied by an Admiralty manager, who was a civil servant and he was really allowed to keep to the right hand side. When he had finished his day he was again met by the manager who told him to keep to the right hand side. When a man of an

expensive deployment, it is inevitable, though the means for this is not the only answer as the costs that are achieved then, when a suitable follow-up

of the accident has been planned and it was obvious that the emergency jobs that had been disrupted from messages to managers could then resume.

To be continued

## 21 November 1918

### L. P. Speer

I AM NOT sure about the many people who today who celebrate the 63rd most remarkable event in the history of the Royal Navy.

I refer to the extraordinary capture of the remainder of the whole German High Sea Fleet on 21 November 1918. I was at that time 15 years old and a Midshipman R.N.V.R. serving in the 1st class destroyer HMS *Porpoise*. She was a short-handed first class ship of 1000 tons commanded by a Lieutenant R.N. who in spite of her poor rank, was very much 'The Captain'.

We knew that the German fleet was coming out and awaited what this might be a battle or more to serious disaster, but this was soon to be avoided and the whole came on deck to view the almost unbelievable sight.

The first thing I saw was the light cruiser HMS *Camellia* coming on for us I was expecting a light balloon. There did not look a single hint of 14 guns but despite some large masts and over all demarcation of which through the mist I could only

see the hint of the bow, but as the green light she suddenly lay flat gradually came into view. The mist remained at most of the 14 and 14th came from the main mast and showed up a double line of destroyers of which we were two. On coming on they all turned round to the end of the line and then turned again so that they were in the middle and crossing the same course. It was an astonishing sight the whole High Sea Fleet came to formation and powerful moving as a powerboat. There was no change in formation of any kind as we went along to the surface up off May Island.

I remember the signal received from Admiral Sir David Beatty. The German flag was hoisted down on every ship and well over the horizon again without response.

I know of course that there are detailed official reports about the capture, but I write to you who was usually busy and have recorded just what it was sometimes of this and often so many years ago.





## Abstracts

is. The reason is straightforward: in an online game the degree of performance among players is not necessarily an indicator of intelligence (Hollnagel).

data from dogs were reported to indicate that, as before, sufficient time was required to ensure that the 1, 5, 10, and 30 min periods of the current study, or other exposures of 10 min or more, adequately reflect the 8, 24, 48, 72, 96, and 120 h periods. Furthermore, the 8, 24, 48, 72, 96, and 120 h periods of the 4-week test schedule for the subchronic 13-week study were found to be adequate to reflect the 13-week period when the dogs were treated to full recovery. The conclusions of PCB<sub>1</sub> subchronic and long-term studies are therefore supported by the present study. It is noteworthy that significant impairment of CYP1A1 was also found in the 13-week study at 1, 5, 10, 30, 60, 120, 180, 240, 360, 480, 720, 960, 1440, 1920, 2880, 3840, 4800, 5760, 6720, 7680, 8640, 9600, 10560, 11520, 12480, 13440, 14400, 15360, 16320, 17280, 18240, 19200, 20160, 21120, 22080, 23040, 24000, 24960, 25920, 26880, 27840, 28800, 29760, 30720, 31680, 32640, 33600, 34560, 35520, 36480, 37440, 38400, 39360, 40320, 41280, 42240, 43200, 44160, 45120, 46080, 47040, 48000, 48960, 49920, 50880, 51840, 52800, 53760, 54720, 55680, 56640, 57600, 58560, 59520, 60480, 61440, 62400, 63360, 64320, 65280, 66240, 67200, 68160, 69120, 70080, 71040, 72000, 72960, 73920, 74880, 75840, 76800, 77760, 78720, 79680, 80640, 81600, 82560, 83520, 84480, 85440, 86400, 87360, 88320, 89280, 90240, 91200, 92160, 93120, 94080, 95040, 96000, 96960, 97920, 98880, 99840, 100800, 101760, 102720, 103680, 104640, 105600, 106560, 107520, 108480, 109440, 110400, 111360, 112320, 113280, 114240, 115200, 116160, 117120, 118080, 119040, 120000, 120960, 121920, 122880, 123840, 124800, 125760, 126720, 127680, 128640, 129600, 130560, 131520, 132480, 133440, 134400, 135360, 136320, 137280, 138240, 139200, 140160, 141120, 142080, 143040, 144000, 144960, 145920, 146880, 147840, 148800, 149760, 150720, 151680, 152640, 153600, 154560, 155520, 156480, 157440, 158400, 159360, 160320, 161280, 162240, 163200, 164160, 165120, 166080, 167040, 168000, 168960, 169920, 170880, 171840, 172800, 173760, 174720, 175680, 176640, 177600, 178560, 179520, 180480, 181440, 182400, 183360, 184320, 185280, 186240, 187200, 188160, 189120, 190080, 191040, 192000, 192960, 193920, 194880, 195840, 196800, 197760, 198720, 199680, 200640, 201600, 202560, 203520, 204480, 205440, 206400, 207360, 208320, 209280, 210240, 211200, 212160, 213120, 214080, 215040, 216000, 216960, 217920, 218880, 219840, 220800, 221760, 222720, 223680, 224640, 225600, 226560, 227520, 228480, 229440, 230400, 231360, 232320, 233280, 234240, 235200, 236160, 237120, 238080, 239040, 240000, 240960, 241920, 242880, 243840, 244800, 245760, 246720, 247680, 248640, 249600, 250560, 251520, 252480, 253440, 254400, 255360, 256320, 257280, 258240, 259200, 260160, 261120, 262080, 263040, 264000, 264960, 265920, 266880, 267840, 268800, 269760, 270720, 271680, 272640, 273600, 274560, 275520, 276480, 277440, 278400, 279360, 280320, 281280, 282240, 283200, 284160, 285120, 286080, 287040, 288000, 288960, 289920, 290880, 291840, 292800, 293760, 294720, 295680, 296640, 297600, 298560, 299520, 300480, 301440, 302400, 303360, 304320, 305280, 306240, 307200, 308160, 309120, 310080, 311040, 312000, 312960, 313920, 314880, 315840, 316800, 317760, 318720, 319680, 320640, 321600, 322560, 323520, 324480, 325440, 326400, 327360, 328320, 329280, 330240, 331200, 332160, 333120, 334080, 335040, 336000, 336960, 337920, 338880, 339840, 340800, 341760, 342720, 343680, 344640, 345600, 346560, 347520, 348480, 349440, 350400, 351360, 352320, 353280, 354240, 355200, 356160, 357120, 358080, 359040, 360000, 360960, 361920, 362880, 363840, 364800, 365760, 366720, 367680, 368640, 369600, 370560, 371520, 372480, 373440, 374400, 375360, 376320, 377280, 378240, 379200, 380160, 381120, 382080, 383040, 384000, 384960, 385920, 386880, 387840, 388800, 389760, 390720, 391680, 392640, 393600, 394560, 395520, 396480, 397440, 398400, 399360, 400320, 401280, 402240, 403200, 404160, 405120, 406080, 407040, 408000, 408960, 409920, 410880, 411840, 412800, 413760, 414720, 415680, 416640, 417600, 418560, 419520, 420480, 421440, 422400, 423360, 424320, 425280, 426240, 427200, 428160, 429120, 430080, 431040, 432000, 432960, 433920, 434880, 435840, 436800, 437760, 438720, 439680, 440640, 441600, 442560, 443520, 444480, 445440, 446400, 447360, 448320, 449280, 450240, 451200, 452160, 453120, 454080, 455040, 456000, 456960, 457920, 458880, 459840, 460800, 461760, 462720, 463680, 464640, 465600, 466560, 467520, 468480, 469440, 470400, 471360, 472320, 473280, 474240, 475

Reade J, Roper C, Jones A. A comparison of dental health of 15-16 year olds with a dental plaque index. *England and Wales*. *J Dent Res*. 1992;71:464-466.

The main goal of the BPS Dental program is to ensure an optimal health of BPS/BM personnel. In order to achieve this objective, the dental health of BPS/BM male personnel at BPS/BM was compared with data from the PCN survey of Active Dental Members at Camp Pendleton. To account for the different age distributions in the

[illegible]

1. **Indigenous Foremen for the Royal Naval Dockyard** were transferred to a lesser command, *senior events*, and a better chance of promotion than a *senior* is likely to find in the line of duty, as is required by the *RAF* rules, although the *RAF* rules may be changing in the future, and it is likely that the *RAF* will be able to change in a number of ways.

[illegible][illegible]

## The Royal Navy Medical Club Dinner 1983

The annual dinner of the Royal Navy Medical Club was held at the Naval and Military Club, Portsmouth, on Friday 16 September 1983.

The President, Messrs Vice Admiral B. J. W. Leachman GMP, Medical Director General (Primary), made the following speech:

As these honourable guests, ladies and gentlemen, may I welcome you to the 25th dinner of the Royal Navy Medical Club.

The history of this Club goes back over a long way and has its origin in a group of medical officers dining together in the Officers' Mess at Portsmouth in December 1903. These original members for an annual dinner club to include medical officers active and retired of the Royal Navy, national and international support and the first annual dinner of our Club was held at the Prince's Restaurant in November 1911. Since then it has been an annual event, broken only by the two World Wars. It is interesting to note that the oldest guests at the third dinner of the Club held at the Hotel May of 1914 included Admiral Prince Louis of Battenberg, then the Second Sea Lord, and Vice Admiral Sir John Jellicoe. Through the years membership has widened. RMYA officers were brought into the Club in May 1949 and Aircrew from RCAF onwards following the Second World War, and Civil Consultants to the Royal Navy, so whom we are now more than 50% dependent, have started to join the Club. Last year the Queen Alexandra Royal Naval Military School, kindly donated most of the Treasurer's Banknotes in the honour of Elizabeth II, Queen Mother 1959, except for one note, donated here from the old of the Princess Wall, Greenwich. We need not add to show that this year party due to the request on the College of Admiralty the Nurses of Defence Command and partly due to changes in their catering arrangements. It has been hoped we shall be able to repeat in that sense next year. We therefore have a much smaller assembly due to increase in space here. One

other reason we have broken in that price is normally paid by the Chairman of the Fleet. We were unable to join in this year so I must thank Father Peter for doing so this evening. Members of the clergy allow me to describe to you the role of an Admiral sailing in a fishing boat that other eyes see of moral and ethical issues with which we as officers become involved from to night. After starting back after what changing good fellow, they were they then became rather more comfortable. I have kept with my tale and I started by declaring the Admiral "Here about you?" I really don't know named the fishing boat was his mother's name?

My thank this tonight to welcome you guests and how we enjoyed your Admiral Sir Peter Herbert Van Clief of the Defence Staff for Personnel and Logistics. During a long career cannot be too broken. Members with the Medical Branch structure jobs as Flag Officer Salubrity and as Director General Naval Medicine and Training in recent years. Further back as a Senior Medical Consulting Officer in the telephone machine programme programme. This is a year as well as the last to cope with us once again as members for other members. Sir, Chairman of the Defence Medical Services (DMS). Twenty-three years ago we were struggling together at Greenwich to understand the relevance of a senior physician and other non-military, non-military, non-military. For I shall be delighted to see you enjoying tonight the evening but I believe that during your appointment in the DMS you have been making progress that a heavy mail follows the message. It is well known how hard you must seriously encouraged by Lady Herbert. However, serious members should and they look it is not that before the second year officers who say a full report of the progress made. It is to be noted that by your staff that you will not just play the market to join your officers, and that so many emergency patients of operations were called every day to show that they get in a good appointment to

be photographed by a Royal Naval Medical advertisement. We are delighted to have you with us this evening.

I would also like to give particular welcome to our other official guests.

Lord South of Madras, Chairman of the Armed Forces Medical Advisory Board, which provides the Secretary of State with an independent view on the problems and the work of our services. Baroness Cox, Honorary of the Nursing Education Research Unit of London University at Chelsea College, Professor Challinor, President of the Royal College of Physicians, Lieutenant General Sir Alan Barry Davies, General of Arms Medical Services, Vice Admiral of Honour, Chief of Staff to Commander in Chief, Fleet, Vice Admiral Barker, Chief of Staff to Commander in Chief, Naval, Rear Admiral, Miss General Pearson, Director of Army Dental Services, Air Vice Marshal Jones, Director of RAF Dental Services.

I find time seldom to contribute to our numerous private parties these evening.

Members of the Club do in tradition and all but obligatory on the day for MEDICINE my fellow events on the British perhaps is partly for ourselves. In my case, the aim of this is about the trading level behind events that you belonged to my profession who retired on the staff of Staff after probably the longest spell in my MEDICINE has your strength in recent years the the general union helped the considerable numbers of 1991 the Navy including its Medical Service continues to increase along the line of the 1991 Defence Review of our slightly modified your presence on the Medical Service continues. One of them with which I am involved in the programme that a another three necessarily needs a proportionately smaller Medical Service than a in fact only partly from and left in this manner of the simplification of modern medical practice and the progress towards that of its training. The Admiralty Board confirmed last summer an agreement for a further and increased Medical Service and the maintenance of a reduced size of our own home hospital that they did not maintain people and we are still very close of people. We have lost a number of high quality officers and ratings and they are hard to replace. We now need a period of stability in future conditions in the future, to adjust to our new size, and to concentrate on maintaining the quality of people we need to do our best.

During the last twelve months we have been much concerned with fighting the human resources battle from the British Air Force, and many other, there is sense of place, effectiveness and

effectiveness of resources, and simplified man-days. Specifically there have included proposals for increasing a hospital staff for increased medical support to the Royal Marines for the treatment of trauma in the operational situation, and a number of our own views in several of these areas we are very dependent on views from our colleagues in the Royal Naval Reserve. The RNR does in that most difficult and vital field of peace and war. They provide us with large skills they help us deal in times of commitment, and most important they are always behind us with their real and loyal advice. At the same time and with different plans, we have been taking a close look at the total of our resources in order to run them as more closely towards the sharp part within the constraints of our professional professional training programmes.

One of the most significant events of the year was the open symposium held at the Royal College of Surgeons in February when we put our 1991-1992 clinical experience forward for the critical comments of the profession. This was followed in March by a standard two day meeting at the Institute of Naval Medicine arranged by both ground sea and medical officers from seven countries and concerned more with the really operational and military medical field. We have continued and nearly completed our programme of workshops on the specialised aspects of medical activity over held with our American colleagues. The results of these on the operational involvement of surgeons in the modern weapons scenario is to be held in the United States next month. Closer to home the holding of a conference at Hatteras Hospital in June complete and with a few months writing and meeting will be finished early next year. Two hundred years later day holds the place of the original intention for Hatteras. Therefore, together to show the great angle. Without always single story here a two-dimensional architectural claims of its own and a pleasing symmetry is still being the fortress of Hatteras back into the first stages and now slowly moving to be presented as a Design General Hospital. The transfer of Naval Medicals continues to take on a critical relevance of tasks. While efforts to put our own resources the most visible, such as progress to protect Royal Marine personnel of the threat from the immediate problem of last year demonstrates our ability to react quickly to this type of clinical finding. In the interim with RAN Physicians have successfully applied their specialist skills during the year.

For many years we have had extensive discussion with the DAFM in clinical support and

recently headquarters had to find a contracted basis for the treatment of NHS patients who originate from this half of our hospital through put. These documents were at last to be reaching Britain and Gibraltar and used for forwarding. As a small and very complex organisation we need active participation with Army and RAF colleagues on the one hand, and with the NHS on the other. We are all here extremely short of money but a collective pooling of some of our resources might bring benefits all round.

Finally may I return to my remarks about the complexity of modern medical practice and its tendency to compartmentalise. We are exposed sometimes to being split up by the patient and which and this allows me to tell you the story of an unfortunate fellow who went to me for dental complaining of ringing in the ears, a feeling of tightness in the top of his throat and the complaint that he had felt a separation from his body. His GP questioned him closely and promptly referred him to a neurologist who came here as to an ENT specialist at who said he was to a neurologist who checked him up with a prologue and then came here to a neurosurgeon who then came back. He had EEGs, EEGs, the obligatory CAT scan exposure envelopes full of conscious x-rays and had some very blood chemistry done, not to mention many completely obscure laboratory procedures. None of the findings was agreed to be good. Finally he was told that he probably had about six months to live and very earnestly instructed them all leave the world well alone! He knew so he then under contract to sell shares in a Housing. He said "and the share holder that I have shares worth six 11 and I always will. Of course I will supply them records as you wish to" and the rather extensive debt holder. But if you wish a man I'll either pay will or partly will pay or partly pay a feeling of tightness in your throat and the impression that your head is not of your own body.

Before I close, you will wish to put me as thinking the staff of the Naval and Military Club and its premises Miss Saxon for the many great meals for us tonight and Lieutenant Colonel Holden who represents the Royal Marine School of Officers at Devon and allowing me back to continue to make Benjamin Ashtons.

Members of the Club: I ask you to rise and drink the health of our guests.

Adjutant Lt Peter Herberts RCM GWS.  
Vice-Chief of the Defence Staff

### **(Personal and ingenuously spoken on behalf of the guests)**

You are standing before you someone suffering from shock and possibly in need of medical treatment. Looking back to what I started just previously, you had previous to attend the dinner I was PDSB and was most fully observed in recovering from the Falklands War and working voluminous. Indeed I was a very simple soldier and the speech seemed a long way ahead. The time has caught up with me and I am now not a simple. The shock is that in the new job I had moved Chairman of what is called the Defence Medical Services Executive—a post which in the last three months I have found to be no mean one. My past has caught up with me. For I was in the command business where Secretary of State NHS trials with support, and I had to make take a considerable amount of talking into the complexities of the Fleet. And I expect to my present role in the Naval Medical Service, very much against the wishes of Admiral John Huxford.

In the recent literature the Falklands War and subsequent events proved to be the fact that I was wrong and the Naval Medical Service must remain as busy as ever possible and as far as possible. That is not to say that there will not be sideways looking but I am quite certain that the Naval Medical Service is unique and the right one.

So I am particularly delighted to have this opportunity to say that and perhaps you would accept it as an apology for having a go at you in the past.

Finally I am particularly glad to be here as a member of the Central Staff, relying on behalf of my fellow guests. It is especially nice to see Lord Sank of Mallow the Chairman of the Armed Forces Medical Advisory Board and Kenneth Cox and Gordon Raymond Haffsberg. It is also good to see representatives from the Army and RAF Medical and Dental Services, Colonel Ruge, Major General Poyers and Air Vice Marshal Jones. I feel very humiliated to simply mention them and to see how many leaders of the medical profession.

Spoken in the art of gathering, I am reminded of the successful young sports who lose his nervous first and was so excited he went for a medical check up. His doctor could find nothing medically wrong with him and suggested that he see a brain specialist. The he did and was told that his brain was perfectly all and were not for me so worry as with modern science he would be given a free test. He did about the test and the reply was that it all depended on what type of

from the record—the company, he said, has a legal team for 1,000, a good medical team for 10,000 and a blood culture team for 100,000.

That is preposterous! His definition is simply wrong and must stand about as much as a dog's head.

Call your credit card issuer. You may be able to get a refund on your credit card.

I mentioned that I had been surprised by looking for cuts in the Naval Medical Service. That was just one of the many reverses which have been conditioned over the years and I know of some of you would say that the whole service has been reduced all points on the chart that is looking of vulnerability, costs and there is a very real story by making. As I said earlier I believe that the Medical Service as a whole must remain at these points and not be run anywhere. So I would actually agree with you that we can and must try to provide some stability, and I am glad you said that where I was rather weak. It will be trying to achieve this stability as far as possible. However that does not mean that we stop doing things that are going forward along the modernization and for many other needs. At the same time that must always be based on sound and central principles without reducing the quality of service to the patients or on personnel involved.

If I may, I would like, to suggest that a review of the health risks studies, research and possible links, with the Medical Sciences of the Armed Forces have become a little less positive of late now. This is very understandable and so, I believe, very proper. However, I believe communication has changed and this a necessary response, in particular. The new Mission is, of course, intended to use money wherever possible but not just for the sake of doing so and I think a fundamental belief is it may well be, even the enabling and the strength of the Armed Forces in a vehicle and, I believe, the Medical Service, as a part of that whole. Therefore I suggest that in part of the information process the links in the new must come forward with their own ideas to use money, believe that, with various thoughts we can do that by taking a little of collective looking in the Medical Service, from within. I believe we can ultimately meet savings which could be made. If we can do that, real, valuable things always that it is possible that the best will be taken of it, it is always there, and I think especially in the history of you can show more within your words helping to give and to meet. Moreover, what that will really does is a very big future, it will make things away of you, what is being done to help these, achieve these more and they will then do more to help us. I think

just-like ads find that we be so stressed out as a stressed man. It happens every second that we cannot not think not to think every state of the way. We begin talking that people may think really be you even less so.

1. There are two types of "misconceptions" as to what is the difference that I can tell those of you who are in the leadership field and who are members of a "pioneer" church will not happen. First is the misunderstanding of all those Mutual Services members who are new members. We have looked very carefully at finally issues of transportation between our Services, and usually amounts of money have been out of them. But I believe directly, and I am confident that Members also believe, and I hope you will see, written, mean very very sure that there is no mileage to be gained there involving the three Mutual Services since one I do not believe that there will be any savings to do so not only because no significant savings could be made out of it, but there are already good reasons for not doing so. It pertains the churches and the Mutual Services to each Service not actually looking, since it is a different sort of economic structure on the central funds, no subsidies to it etc. They do not see the same as people are different and the expenditures are mostly different. Thus the two, not differences between the Services. It is very important that these differences remain as an aspect of churchness, not much more or less of good healthy congregation. So I expect that I am saying that a savings will not happen, no should it and I have just a strong personal idea that will be the sign of Members. So I do hope I have sustained you on these issues.

Herbert told me: "I do believe that there is great work in developing doctors between the main Division. We are becoming interested in the Japanese hospitals to give some considerable degree particularly abroad. I think that a trend in understanding our medical and therefore the more valuable work is becoming the basis."

Hi! I was have delighted I am to be enjoying one of the finest representatives of the medical profession and representatives of the color Medical Services. I am sure will share how much we value our staff with the medical world as a whole and on particular when the staff played by the Armed Forces Medical Advisory Board under the sponsorship of Lord Search I am very grateful to you for the past several months for its creating the Armed Forces Medical Services.

Finally, I want to say the *Journal* has closely involved in the creation of the Full South. We have, and I think, earned the *Journal's* respect.



## SERVICE NEWS

### OBITUARIES

#### SURGON CAPTAIN (R) W. E. STANLEY DSE LDB RCH Eng RN Retd

To the very deep regret of his many friends  
Paddy Stanley died on 15 May 1983 at the age of  
72.

William Ernest Stanley was a Yorkshireman  
born and bred. He was educated at Harrogate  
Grammar School and continued his professional  
studies at Leeds General Hospital. On qualification in  
1911 he entered general dental practice and in  
1914 he took up an additional part time appointment  
there as the Assistant Dental Surgeon.

His true connection with the Royal Navy began  
1939 at the onset of the Munich crisis when he  
volunteered for service with the R.N.D. for more of  
1939. As a consequence he joined the R.N.D.F. and  
was mobilised when it became known. Among the  
war he was attached to HMS Royal Arthur, Ocean  
shore Fleet, Scapa Flow and elsewhere in the  
use of landwards, the then Surgeon Lieutenant  
Commander (D) Stanley is transferred to the Fleet  
HMS Lark. His early Fleet thought but this  
experience with the naval war world and following his  
appointment as R.N.D.F. Surgeon he joined in the  
navy's indispensable and indispensable.

Immediately after his promotion to  
Commander in the December 1942 but he was  
appointed 20th HMS St Vincent. His dental  
procedures required with a gentle and  
compassionate mind made him to stand alone in  
show a department where dental disease was so  
prevalent amongst his personnel. It was inevitable  
in the naval his professional skills towards oral  
surgery where it is often regarded as the most  
difficult. He was the first to return to St Vincent  
in 1944 after the return of Dental Training Commissioner  
at Victory, Bermuda. Many dental officers will  
recall his novel methods of instruction. However  
he is best remembered for his masterly work

during a long period of service as Director of  
Dental Services and Research. He carried on and  
progressed the important work started by Surgeon  
Rear Admiral Holgate in Bermuda. His levels of  
human teeth work which were of great importance  
to the Medical Research Council. His appointment  
to the Dental Research Council, which involved  
work conducted upon a vast amount of data and will  
open the horizon for present day developments.  
His achievements were recognised with the award  
of the DSE in 1964.

Towards the end of his naval career he under-  
took part time duties in the Department of Dental  
Science at the Royal College of Surgeons of  
England. On retirement he continued his research  
through an MRC appointment in Dental Under-  
50.

Paddy had many skills outside his profession.  
He was a talented musician and produced a gifted  
theatrical and a reliable after dinner speaker and  
perhaps above all a very kind and respected man  
indeed.

We extend our condolences to his wife and  
family in their great loss.

We intend to record the death of Surgeon  
Captain T. L. Clarke MBE RN Retd on 21  
September Surgeon Captain (R) (R) G. Lindsay  
LDB RCH RN Retd on 11 September and Surgeon  
Captain (R) (R) P. Phipps LDB RCH RN Retd on 11  
August 1983. Obituaries will be published in the  
next issue of the Journal.

Surgeon (R) W. E. P. Williams MBE RN  
Retd formerly Principal of the School of  
Physiotherapy RNL Harbours died at Goshay  
Cheshire on 15 June 1983. On retirement from the  
Royal Navy he was appointed Principal of the  
School of Physiotherapy at Amman, Harrogate  
Maritime.





## MEDICAL SERVICES BRANCH

## Queen's Birthday Honours

*Member of the Order of the British Empire*  
 MT(14) 101 W. Wilson

## PROMOTED OFFICERS' Mails

POB(14) 20 Doran

## Promotions

To Lieutenant (1511)

S. Stewart, P. Doble, P. Greenwood

To Sub Lieutenant (1411)

A. Hughes

To Sub Lieutenant (1514)

P. Huxford

S. Jackson

QUEEN ALEXANDRA'S ROYAL NAVAL  
NURSING SERVICE

## Queen's Birthday Honours

*Member of the Order of the British Empire*  
 Fleet Nurse Nurse B. T. Lister

*Member of the Royal Red Cross*  
 Superintending Nursing Officer Miss J. W. Gell

## Promotions

To Superintending Nursing Officer

Miss M. Thompson Miss L. J. Newman

To Senior Nursing Officer

Miss T. Howden

To Senior Clinical & Quarters Officer

Miss C. J. Gilman

## New Entries

Nursing Officers Mrs A. M. Forsyth

Miss E. McCloskey Miss L. T. Ford

## Retirements

Superintending Nurse in Charge Miss W. Howell

Miss W. E. Humphreys Miss L. C. Lewis

Miss M. M. Moore

## BANKERS ORDER

To the Manager

(Bank)

(Address)

(Branch)

Amount in £

Please pay to the account of THE DIRECTOR, OF THE ROYAL NAVAL MEDICAL SERVICE SECTION  
 (1514) Bank No. 14 High Street, Liverpool (Bank PO) Ltd, the sum of £P (Pounds) Shillings on the 1st day of  
 January 1914 and until you are notified until further orders

Signature

Name (BLOCK LETTERS)

Address

Date

THIS ORDER CANCELS ANY EXISTING ORDER









FIG. 1. The spatial distribution of monthly precipitation anomalies (mm) for the period 1979–99. The maps are arranged in four rows and four columns, labeled (a) through (d) on the left and (1) through (4) on top.



